EFFECT OF PSYCHO-SOCIAL FACTORS ON SCIENCE LEARNING OF TRIBAL CHILDREN OF ORISSA

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ACKNOWLEDGEMENTS

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CHAPTER-I

INTRODUCTION

1.1 : Introduction :

Education is the basic input for any sustainable development of the society It aims at educating the masses to become better citizens and more useful members of society Education is viewed as one of the most important instrument for an all round development of the individuals Realising the importance of education for a democratic country, the constitution of India enshrines certain provisions which promises equality of opportunity for education at all levels and also guarantee the educational advancement of the scheduled castes and scheduled tribes The scheduled castes and schedule tribes constitute the `core' among the weaker sections in India.

Article-45 of the constitution of India constitutes the Directive Principles of the state policy which hopes to achieve the universalisation of elementary education for the children in the age-group of 06-14 years within 10 years of the commencement of the constitution. Further, Article-46 emphasises the promotion of educational and economic interests of the scheduled castes and scheduled tribes. Article-46 reproduced as follows .

Article-46 : "The state shall promote with special care the educational and economic interests of the weaker sections of the people, and in particular, of the scheduled castes and scheduled tribes, and shall protect them from social injustice and all forms of exploitation"

Education of the scheduled tribe has been given national priority. As per the National Policy on Education 1986, and its revised version (1992) the following measures are being taken to bring the scheduled tribes on par with others ·

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(i)   Priority will be accorded to opening primary schools in tribal areas. The construction of school building will be undertaken in these areas on a priority basis under the normal funds for education, as well as under the special schemes.

(ii)   The sociocultural milieu of the scheduled tribes has its distinctive characteristics which includes their own spoken languages. This underlines the need to develop the curricula and devise instructional materials in tribal languages at the initial stages, with arrangements for switching over to the regional language.

(iii)   Educated and promising youth belonging to the scheduled tribes will be encouraged and trained to take up teaching in tribal areas.

(iv)   Residential schools, including Ashram schools, will be established on large scale.

(v)   Incentive schemes will be formulated for the scheduled tribes keeping in view their special needs and life styles. Scholarships for higher education will emphasise technical professional and para - professional courses. Special remedial courses and other programmes to remove psycho-social impediments will be provided to improve their performance in various courses

(vi)   Anganwadis, Non-formal and Adult Education Centres will be opened on a priority basis in areas predominantly inhabited by the scheduled tribes.

(vii)   The curriculum at all stages of education will be designed to create an awareness of the rich culture identity of the tribal people and also of their enormous creative talent.

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NPE also hints that science education be extended to the STs who have remained outside the purview of formal education If one hopes to bring ST pupils under the umbrella of science education so as to help them to attain scientific literacy and grow to become scientifically conscious citizen, there is a need to study the effects of psycho-social factors on the science learning of the tribal pupils. This project intend to take up this study.

1.2 : Tribes of India :

The people of India include a very large number of primitive tribes who subsist on hunting, fishing, or by simple form of agriculture. The tribal groups are pressured to form the oldest ethnological sector of the national population. The origin of the Indian scheduled tribes has been traced to such races as the proto-Australoids who at one time, covered practically the whole of India. The scheduled tribes of India are the earliest inhabitants or indigenous people of the country, who were unable to defend themselves and were gradually forced to recede before the invading hoards of such people, as the Dravidians, Indo-Aryans and Mongolians coming from the West, North-West and North-East respectively. They were superior in strength and in mechanical equipment. The indigenous people thus took shelter in the mountain depths and thick jungles where a considerable number of them are still found. It has been estimated that there are more than 258 tribal communities speaking 106 languages are residing in India.

1.3 : Tribes of Orissa :

Orissa state occupies an important place in the country having high concentration of tribal population. There are sixty two different tribes in the state. Some of the important tribes are (1) Juang (2) Lodha (3) Saora (4) Lanjia Saora (5) Bonda (6) Kutia Kandh (7) Hill Kharia (8) Sabara (9) Paraja (10) Munder (11) Santala.

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Among the tribes of Orissa, formal education is comparatively of very recent origin. They were having their traditional educational system which were community specific In true sense of the term, education means enculturation/ socialisation and inculcation of values acquired by societies and handed down from one generation to the other. Education in their societies have helped maintenance of social structure and goal attainment for sustained living They have been surviving among challenges, using their indigenous skills and techniques Among the tribal community of Orissa there have been some forms of institution which have been importing education to the tribal children and the youths. These informal institutions are called dormitories. In Orissa, one can find two types of dormitories viz. monosexual and bisexual dormitories. After marriage one ceases to be member of the dormitory. The senior members of the dormitories trained the juniors in different fields of resources and culture management. The seniors guide the juniors to emerge as responsible members of the society. The dormitories solve the purpose of educating the younger generation about the folk tales, myths, legends, riddles, proverbs, religious and ceremonial prescriptions, ethos, ideologies, morals, norms and values of the community. Members of the dormitories are trained to manage themselves as per the expectation of their respective society. All these practices are still continuing in addition to facilities provided by the government.

In general, the tribes of Orissa are very poor They collect roots, leaves, fruits, honey, mohua, khajuri rasa (date palm juice), fire wood and other minor forest products for their livelihood. Few tribes in the dense forest do hunting and preserve flesh of different animals for the rainy season. They grow hill paddy, ragi, horse gram, cow pea, til, pigeon pea, maize etc. by doing "Podu" (shifting farming) cultivation, which is rampant in the districts.

1.4 : Educational Facilities for the Tribals :

To promote formal education different types of residential and non-residential schools are established in tribal pockets of Orissa by the state government.

However the population served by an educational institution is comparatively smaller in tribal districts than in the non-tribal districts. This is due to the fact that the concentration of tribal population is more in the areas having low density of population. For the education of the scheduled tribes and scheduled castes the state Harijan and Tribal Welfare Department has been playing a major role. The welfare department of the state maintains special schools known as Sevashram and Residential Sevashram for primary education, Ashram, Kanyashram for Upper Primary (M.E.) education and High school for Secondary Education in the whole state. Besides these special schools, 12% of the seats in all educational institutions are reserved for scheduled tribe students.

Incentives of different forms are provided to promote education amongst the tribals. The facilities provided to the tribal students include free supply of dress, text books, note books, award of stipend, free food, medicines, utensils, beds, blankets and mosquito nets

1.5 : Science Learning in Schools :

Science learning or the learning of science is related to student's and teacher's conceptions of science content, the nature of these conceptions, the aim of science instructions, the purpose of particular teaching events and the nature of learning process. However science is primarily learned as an

accumulation of facts in schools by the students. Rote learning becomes the means of learning in the class room because classroom discussions of alternative concepts, promotion of divergent thinking are not considered as a part of "work" of the classrooms rather viewed as wastage of time that hinders efficient progress. (Baird and Mitchell, 1986)

Many theories of learning have been suggested by psychologists The process of learning takes place at different levels, depending on the prior experience of the learner, his alternative concepts, his intellectual level/abilities and how concept is transacted or presented to him. The process of learning can be categorized in three levels viz association, conceptualization and creative self direction (Wilson et al., 1974) The work of Piaget, Ausubel, Gagne and Bruner regarding teaching of science and how learning takes place are noteworthy.

Science learning is very important for the tribals. They are away from the mainstream of civilization and still believe in superstitions. For different diseases they worship different gods and goddess and never seek medical help. They believe that the Almighty will get angry if one takes medicine. It is very difficult to make them understand their misconceptions and the only means to remove their superstitions and misconceptions is by compulsory education. By showing different scientific experiments they may realise the importance of science. Motivating them for science learning and to eradicate superstition of the tribals is the prior duty of the government and the conscious citizen of India. Superstition is one of the major cause for the suffering of the tribals. To promote science learning the factors affecting the science learning are to be ascertained.

1.6 : Psycho-Social Factors :

Different factors affecting science learning of the tribals are listed down under the headings, psychological factors and social factors. Under psychological factors we consider the cognitive factors and non-cognitive factors. Cognitive factors include cognitive development level of the learner & creativity Non-cognitive factors include personality, study habit & attitude towards science learning Social factors include socio-economic status, superstitions and other demographic variables

1.7 : Statement of the Problem :

Tribal education puts emphasis on two aspects, namely, (POA, 1992).

−   the socio-cultural milieu of the STs has its distinctive characteristics, and

−   the development and awareness of the enormous creative talent of the tribal people

On the issue of science education, the NPE stresses that ;

−   Science education be strengthened to develop in the child the spirit of enquiry, creativity, objectivity,

−   Science education be designed to enable the learner to discover the relationship of science with agriculture, industry and other aspect of daily life, and

−   Science education be extended to the vast numbers (i.e., like the STs) who have remained outside the pale of formal education

On the issue of early childhood care and education, the NPE gives importance to

−   Child-centered approach, and

−   Recognition of the individuality of the child.

If the guidelines of the NPE on the above three issues are coupled with the necessity for the development of scientific literacy then the immediate responsibility that rests on all of us is to see that the tribal pupils at the elementary stage :

— develop an interest in the study of science.

— acquire scientific literacy and not just literacy, so that they do not remain behind the mainstream. They are expected to form an active component of the scientifically conscious society in the coming years.

— develop suitable scientific temper and attitude so that while retaining their own culture they still will be in resonance with the rest of the community in all areas of social interaction

Achievement of these three major goals demand that :

(a) a study be made to identify, analyse and map the cognitive, non-cognitive and socio-cultural factors that affect the science learning of the tribal pupils.

(b) effects of the interaction between these factors to be investigated.

(c) problems and possibilities in the context of science learning be identified in clearly definable terms, and

(d) intervention strategies be designed and implemented to accelerate the scientific literacy of the tribal pupils.

In this project we address ourselves to the goals (a) and (b) stated above.

1.8 : Objectives :

The study is intended to investigate the following :

(a)   The effects of cognitive factors (developmental level and creativity) on the science learning of the tribal pupils.

(b)   The effects of non-cognitive factors (personality, study habits and attitude) on the science learning of the tribal pupils.

(c)   The effect of socio-cultural factors like socio-economic status, social superstitions and other demographic variables on the science learning of tribal pupils.

(d)   The difference in science learning and cognitive development level between the tribal pupils and the non-tribal pupils belonging to the same geographical location.

1.9 : Overview of Literature :

Several studies have been conducted in India to find out the difficulties and disparities in the educational progress among the tribals.

From the series of studies conducted by NCERT under the District Primary Education Programme (DPEP) it is revealed that the achievement level of scheduled tribe children are lower compared to the children belonging to the general caste attending the same school. The study of Saxena et.al. (1995) found that the achievement of tribal children in language and mathematics at primary stage is lower than the non-tribal children Various interventions were planned to enhance their achievement level however their achievement level could not be brought up to the mark

Study conducted by Ambasht *et.al.* (1995) suggested that suitably designed research is needed to understand the effect of home background factors such as parental education, parental attitudes, the language spoken at home, economic condition of the family on the achievement of scheduled tribe students. In Madhya Pradesh the teacher working in tribal areas are being given special training so as to incorporate academic interventions which may enhance the academic achievement of the tribal students

Researches on tribal educational problems, educational opportunities, social facilities, educational interest and vocational interest patterns were conducted by Lakhera, (1986) & Gaur, (1990). Ramana (1989) pointed out that the infrastructure facility of Ashram schools is poor, the teaching learning process not satisfactory and the absentism and stagnation are high However the Ashram schools have perceptible impact on local community.

A research study to find out the impact of modern education on social, cultural, economic, political and religious life of the community including its family structure and organisation was conducted by Malhotra (1990).

Ekka (1990) studied the educational facilities, enrolment, literacy, effectiveness of various welfare schemes and the overall educational development of tribals in Orissa. The researcher attributes the low level of education of tribals is due to their inability to derive benefits from various welfare measures planned for improving their education

Chobey (1991) compared personality factors, academic achievement of socially high and low deprived tribal youths of Rajasthan but no significant difference was reported.

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Tripath (1991) undertaken a comparative study of the cognitive functioning, affective adjustment and academic achievement of scheduled tribes children attending special Ashram schools and integrated upper primary schools in Orissa. The study reveals that the tribal children in integrated schools showed a more field independent cognitive style than the tribal children in tribal schools Various factors like occupation, income, education of family, housing facilities and reading time available were found to be positively related to academic achievement.

Some comparative researchers on scheduled tribes and other castes groups were also undertaken by different researchers. Sharma (1989) found that the tribal pupils are significantly inferior to the non tribals on a comprehensive scientific aptitude test but significantly superior to them on accuracy of observations at both levels of educational status

Talesara (1988) & Gaur (1989) had undertaken researches on education of scheduled tribes financed by ERIC, NCERT. Talesara analysed the role of modern education in integrating tribals with the mainstream and also attempts to identify the regional-level areas in which integration of various tribal groups in Rajasthan is required. Gaur had done a status survey of the special facilities given by the government for the educational upliftment of the tribal population. He also investigated the attitude of teachers and guardians towards this endeavour The result revealed that there is need for medical facilities and training in self-employment.

Bhargava (1989) undertaken a research study to assess the educational facilities available in the tribal districts of Orissa The study revealed that the educational facilities were better in non-tribal district than tribal district, in terms of school building, number of schools, size of classroom, literacy facilities like libraries and physical facilities like black boards.

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A number of studies have indicated that development among different tribal communities has not been taking place at an uniform pace. Some are more advanced and are enjoying most of the benefits provided for their community, where as, others are not even aware of these programmes and schemes. In addition to the above, few research studies have also been conducted on psychological aspects of the tribal people.

However no study has been undertaken to know the effects of psycho-social factors on the science learning of the tribal pupils. Because of this, it was planned to conduct a study on the above areas, hence this study.

1.10 : Conceptual Frame Work :

The traditional positivist view about the teaching-learning of science was that :

(a) Knowledge exists in isolation as a passive, well definable entity.

(b) Teaching is the transmission of objective knowledge.

(c) Learning is the uncritical absorption of this knowledge.

However, the constructivist view is that :

(a)   Knowledge is an ever changing, ever evolving process involving ongoing activity.

(b)   The teacher is a partner in the learning process in the sense that he has to facilitate the creation of the learning environment where the knower will construct his/her own knowledge.

(c)   The learner instead of being a passive, powerless learner is an active, constructive knower, empowered to take charge of his or her own learning.

From this constructivist point of view learning of science, particularly at the primary level, has a "situatedness" inbuilt into its basic frame work This "situatedness" has several clearly discernible dimensions.

(a) "Situatedness" in the developmental level of the child :

In a piagetian system the development of the ability of internalising specific logical structures determines the degree of learning by a child. Thus an assessment of the piagetian stage in which a child is will help one to ascertain the concepts the child can assimilate. Alternatives to this are available in the form of (a) M-space formalism of Pascual-Leone, (b) Information integration model of Anderson (c) Zone of proximal development of Vygotosky. However, non of these has been developed into a suitable form as to take into a classroom situation. Thus in this study we will confirm ourselves to the piagetian developmental stages.

(b) "Situatedness" in the personal constructs of the child :

Following the important observation of Ausubel that the single most important factor which determines the degree of learning of the child is his/her personal constructs (now called as alternative conceptions), an active research programme has developed over the last decade. In this programme studies have been conducted to diagnose, analyse and map pupils alternative conceptions about specific concepts, ascertain interrelations between concepts. Efforts have also been made to diagnose their genesis and suggest strategies for modification and/or absorption of the concepts.

In this project the personal construct of the child is not taken into consideration.

(c) "Situatedness" in the creativity of the child :

It is felt that tribal children are creative in the context of their art, music, dance and other aesthetic areas. Creativity is one of the basic drives without which one cannot progress. In this study we plan to make an assessment of their creativity and also assess its correlations with their science learning.

(d) "Situatedness" in the personality of the child :

Personality as a dimension is included in the present proposal to obtain indications about the degree of differences among the tribal children by applying the CPQ test of Cattel and Cattel. This will help us in assessing how far the tribal children are different from one another in terms of Urban Rural variations, Less, Least and Most accultured situations. This will also give us a chance to peep into their patterns of behaviour and their relationship with science learning.

(e) "Situatedness" in the attitude of the child :

For science learning of the tribal pupils it is felt that an assessment of their attitude towards science learning will help us to know the scientific attitude and temper of the child. We wish to peep into this complex domain of science-society interaction

(f) "Situatedness" in the study habits and family background of the child :

We in this study also seek answers to such questions as ·

— What are the study habits of the tribal pupils ?

— Does tribal pupil prefer rote learning ?

— Does the family encourage the study habits of the pupils ?

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–   What are the different constraints which affect the study habits of the child?

–   Will the improvement of study habits need orientation of the parents ?

–   Do parents comprehend the importance of regular study habits ?

–   Do the student use supplementary materials to enhance their knowledge rather than text books ?

–   Do the tribal pupils like to read key books ?

–   How good is the domestic environment to foster study habits ?

These are vital questions in so far as the science learning by the tribal pupils is concerned and need attention.

(g) "Situatedness" in the cultural background of the child :

For the tribal pupils the cultural background is likely to play an important role in their science learning. However this aspect is not included in the present study.

1.11 : Research Questions :

(I)   Do the tribal pupils, having the same chronological age, belong to the same piagetian stages ?

(II)   Is there any difference between the piagetian stages of the tribal and non-tribal pupils belonging to the same age group ?

(III) Is there any difference in the degree of science learning between the tribal and non-tribal pupils belonging to the same chronological age ?

(IV)   Is there any significant difference between the creativity of the tribal and non-tribal pupils ?

(V)   Does creativity of the tribal pupils affect significantly their degree of science learning ?

(VI) Do the non-cognitive factors like, personality, study habits and attitude differ significantly between the tribal and non-tribal pupils ?

(VII) Do the non-cognitive factors affect significantly the degree of science learning by the tribal pupils ?

(VIII) Is there any significant difference in the mean science achievement scores of the tribal pupil belonging to high and low SES ?

(IX) Is there any significant difference in the degree of science learning of the tribal pupil belonging to different parental education ?

(X) Is there any significant difference in the degree of science learning of tribal pupil believing and not believing superstition ?

1.12 : Delimitation :

The present study has the following delimitations.

— The study is confined to Gajapati district of Orissa.

— The infrastructure facilities provided to all the schools are taken to be uniform.

— The teaching efficiency of the teachers of Gajapati district are taken to be uniform.

— The chronological age of all the pupils studying in class 'V' are taken to be the same.

— Assessment of personality is confined to only one aspect of personality i.e. extrovert or introvert

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CHAPTER-II

DESIGN OF THE STUDY

2.1 : Introduction :

The design of the research study is presented systematically under the following headings

- Research Methodology.
- Sample
- Tools used.
- Data collection, and
- Statistical Techniques used

2.2 : Research Methodology :

The present research study involves collection of data in order to test hypotheses concerning the current status of the subject of the study The research study also intends to find the correlation between different psychosocial factors on science learning of the students. The present study involves collection of data, analysis, comparison and interpretation. This research study may be categorized as descriptive method of research.

2.3 : Sample :

The sample was chosen so that data on each of the identified variables can be collected. The universe of the study is the total population of the tribal pupils of Orissa. However due to constraints of time and resources only the Gajapati district of Orissa have been taken for the study. The reasons for choosing Gajapati district are as follows.

- Gajapati happens to one of the major pockets of tribal population of Orissa.

- As per the latest official report (2001 census), the population of the district is 5,18,448 out of which tribal population is 2,65,675. Thus the tribals constitute almost 50% of the population of the Gajapati district.

–   The number of male and female in the total population is as follows

Male   . 2,55,288
Female : 2,63,160

The number of male and female in the tribal population is as follows :

Male   : 1,28,760
Female · 1,36,915

–   Literacy percentage of the general category in the district is 72.17%

Male   : 82.04%
Female · 62 28%

Literacy percentage of the S.T category is 38% out of which male and female literacy percentage is as follows :

Male   : 51.84%
Female : 24.83%

Compared to the 1991 census there is considerable increase in the literacy percentage.

According 1991 census the literacy percentage of male and female are as follows

Male   . 20.0%
Female : 9.0%

–   Number of S T students in general school   : 27,595

Sanctioned strength of S T. students in Ashram schools,
Kanyashram schools and Sevashram (residential) schools   :   4,660

                                                    Total : 32,255*

*Source . *D.I. of schools and D W.O Paralakhemundi.*

In order to collect data purposive sampling procedure will be followed because tribal pupils are available mostly in specific pockets or in schools meant for them rather than in all the schools of the district.

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In Gajapati district there are seven number of blocks, out of which five are tribal blocks. Block wise percentage of S T. Population to total population is depicted in table-I.

Table-1 . Blockwise percentage of S.T population to total population.

Sl.No.	Name of the block	Percentage
1.	Gumma	71.57
2.	Kashinagar	30 09
3.	Mohana	56.87
4.	Nungada	74.72
5.	Paralakhemundi	10.45
6.	R. Udayagiri	68.20
7.	Rayagada	77.82

Source : *District statistical hand book-1997, Published by Directorate of Economics and Statistics, Bhubaneswar, Orissa.*

Though only 30% population of Kashinagar Blocks are tribals however considerable number of tribal children have enrolled in the school at Rani Pentha. Hence for our purpose the sample was also taken from Kashinagar Block. Fig.2.1 represents state of Orissa in India Map, Fig.2.2 represents Gajapati district in Orissa Map and Fig.2.3 represents the seven different blocks of Gajapati district.

Gajapati district is full of natural beauty and all the Ashram & Sevashram schools are located in natural surrounding, away from villages. The different blocks of Gajapati district and the schools under each block used for the work is being given in the flow chart depicted in Fig.2.4.
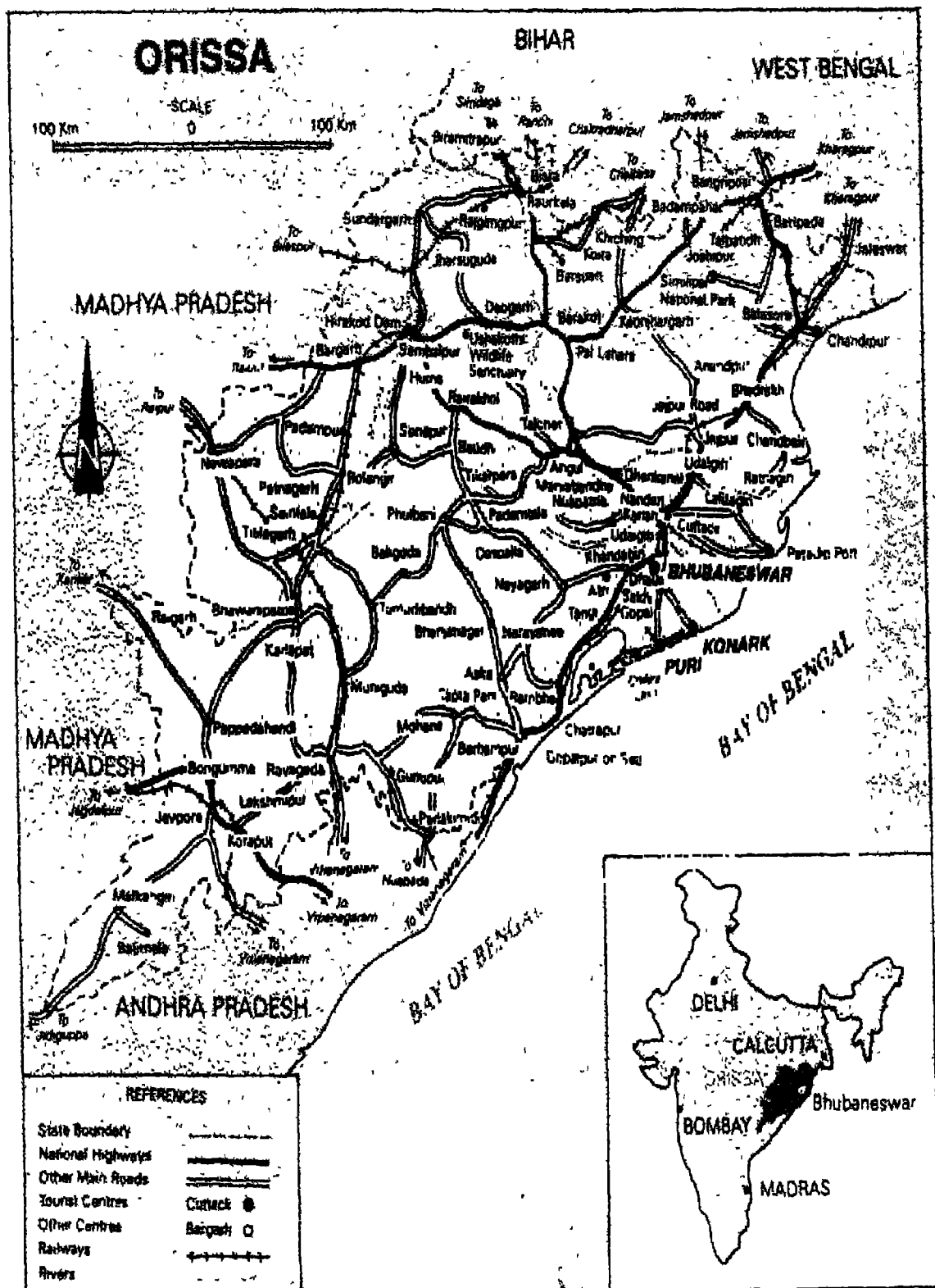
FIGURE-2.1 : ORISSA IN INDIA MAP
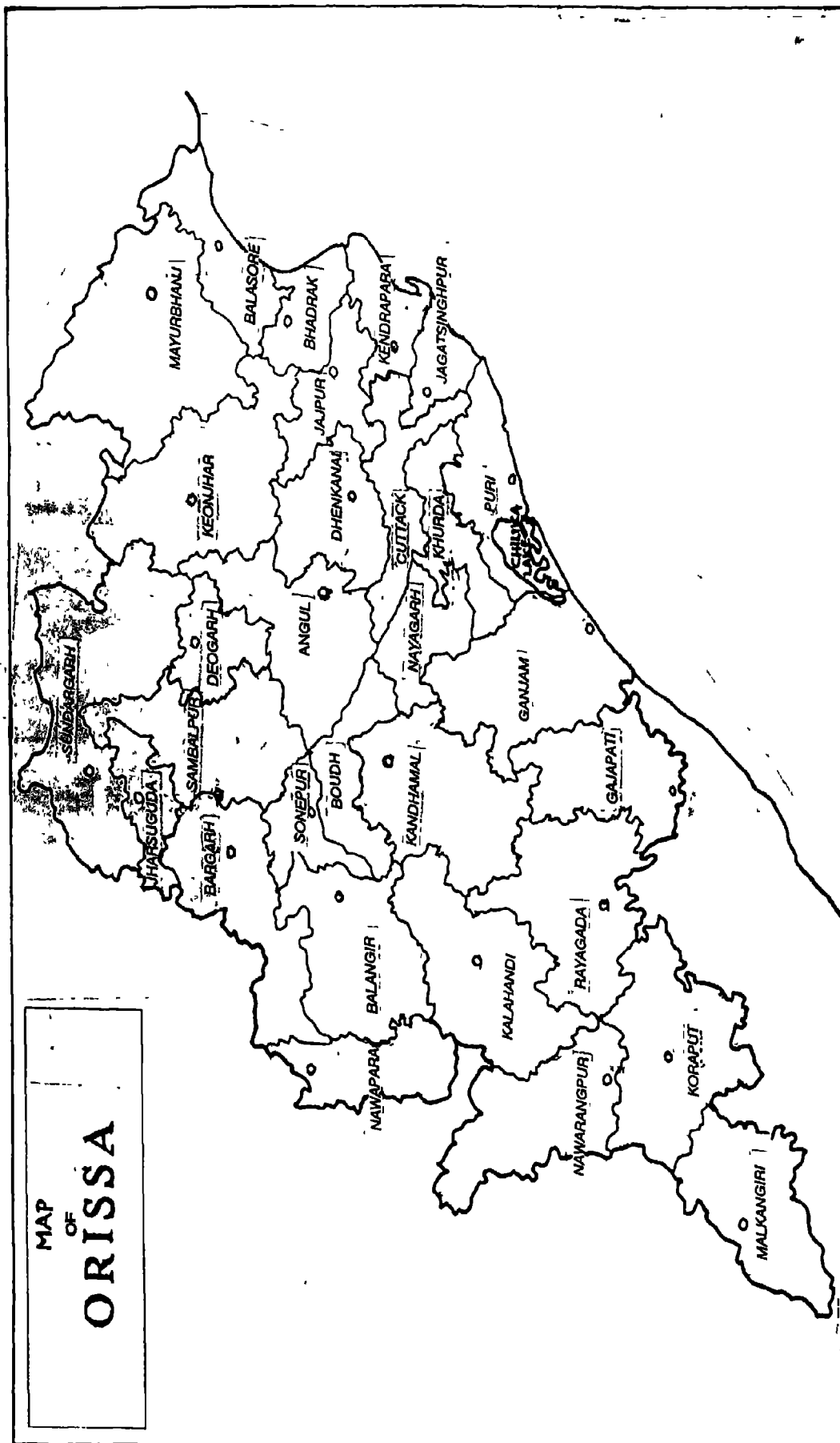
MAP OF ORISSA

FIGURE-2.2 : GAJAPATI DISTRICT IN ORISSA MAP

MAP OF
GAJPATI DISTRICT

SCALE IN KMS

4 0 4 8 12

MOHANA

RUDYAGIRI

NUAGARH   RAMGIRI

SERANGO
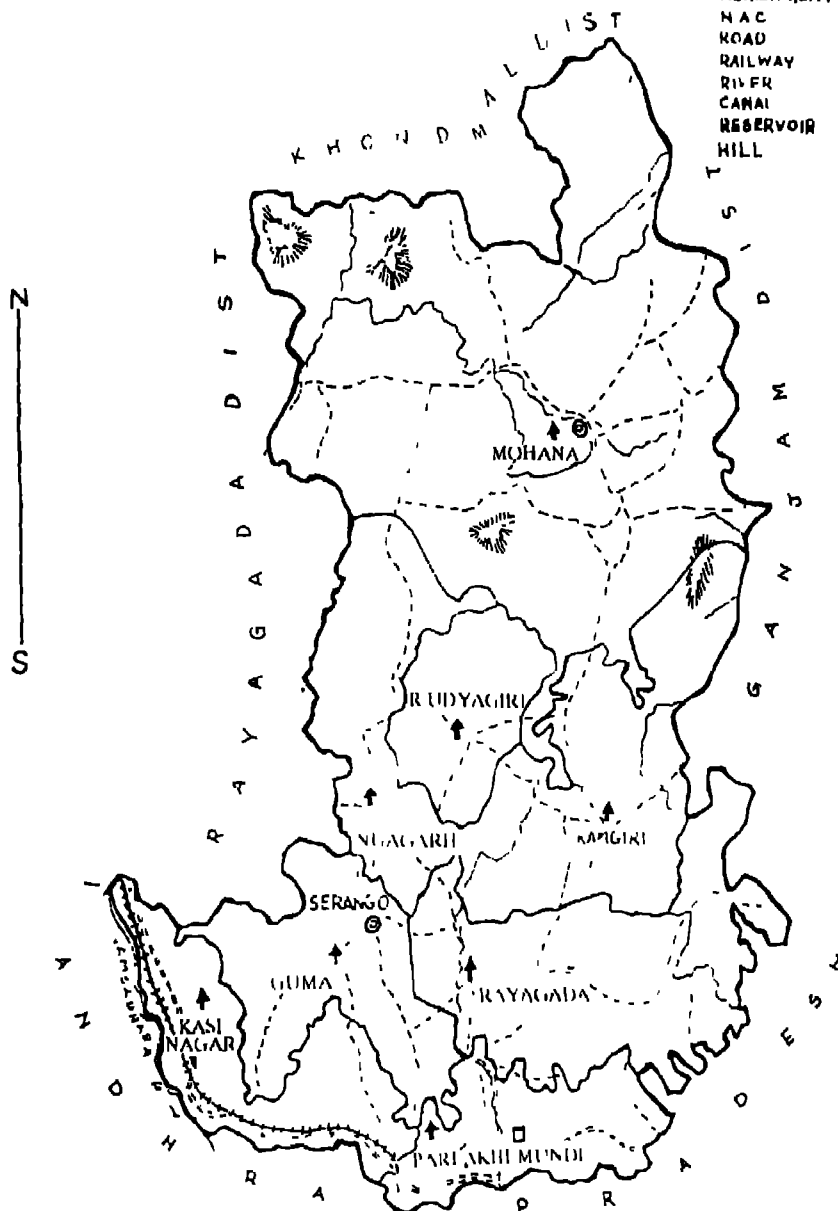
GUMA   RAYAGADA

KASI
NAGAR

PARLAKHIMUNDI

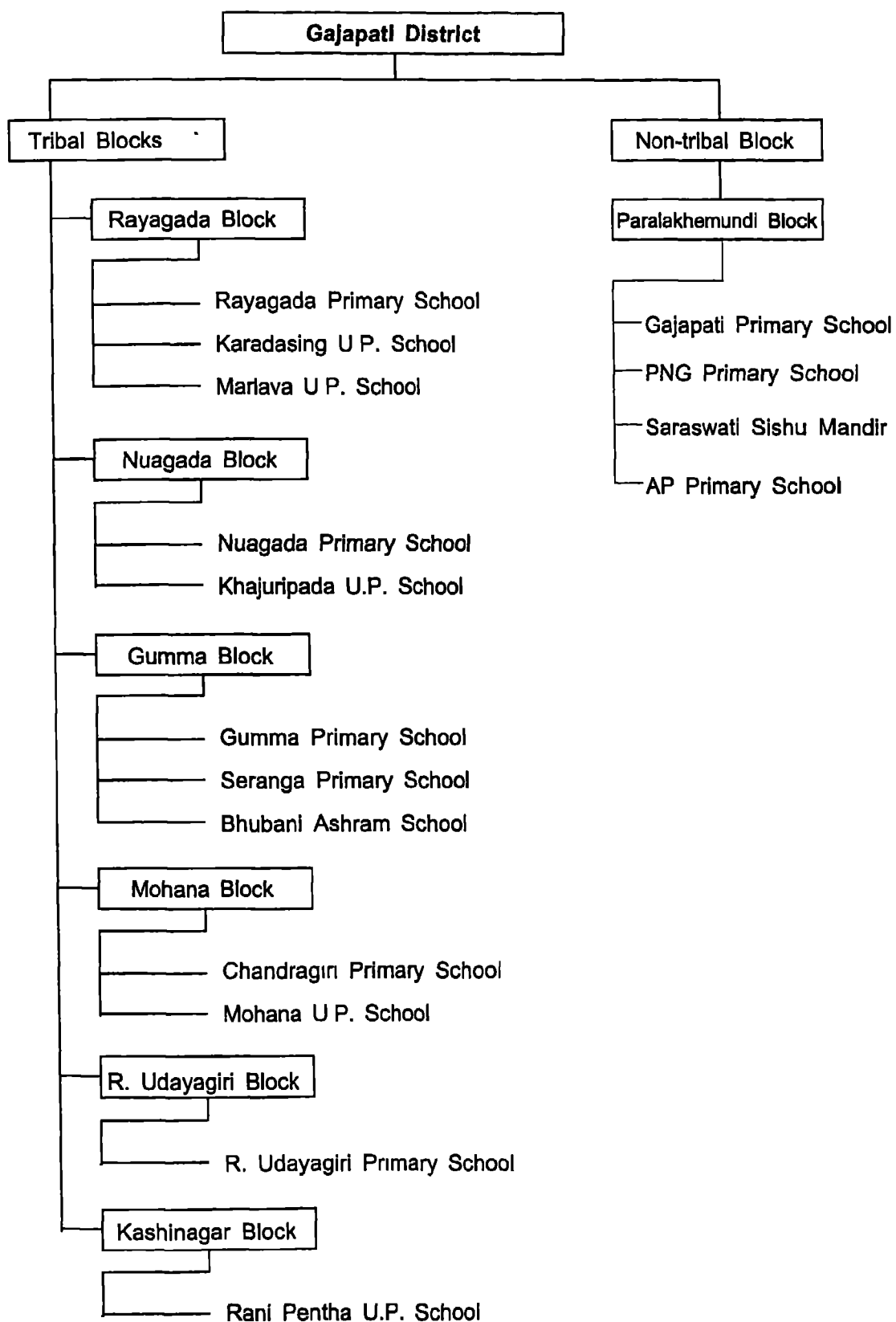FIGURE-2.3 : SEVEN BLOCKS IN GAJAPATI DISTRICT MAP

Fig.2.4 : Schematical blockwise representation of different schools of Gajapati district used for the study.

Table-2 : Statistics of the sample

Sl No	Block Category	Name of the Schools	No of Boys B	No of Girls G	Total no of Pupils (B+G)
1	Non-Tribal	Gajapati Primary School	32	28	60
2		P N.G Primary School	28	30	58
3		Saraswati Sisu Mandir	21	33	34
4		A P Primary School	27	27	54
5	Tribal	P S.Rayagara	21	18	39
6		U P S , Karadasing	20	17	37
7		U P S , Marlava	29	22	51
8		P.S. Nuagada	27	19	46
9		U P S Khajuripada	34	18	52
10		P S . Gumma	21	18	39
11		P S Sarangar	23	20	43
12		Ashrama School Bhubani	21	11	32
13		P .S Chandragiri	22	17	39
14		U.P.S , Mohana	19	17	36
15		P .S., R . Udayagiri	22	19	41
16		U P S Ranipentha	17	14	31
		TOTAL	394	328	722

The tests were administered on more than thousand pupils, however due to absenteeism only 750 pupils could appear for all the seven tests out of which 501 were tribal pupils & 249 are non-tribal pupils. The non-tribal sample is being taken for comparative study. Some answer sheets were not properly answered and incomplete. Hence again during the scoring some were rejected. Finally the sample size was 722 (486 tribals + 236 non-tribals). The sample statistics is given in table-2.

2.4 : Gajapati District at a Glance :

The Paralakhemundi subdivision emerged as a new district in the year 1992, Oct-2. Prior to this, it was under Ganjam district of Orissa Gajapati district is situated on the northern extreme of the Eastern Ghats. It touches Andhra Pradesh towards south. The geographical area is 3,850 00 sq km The district comprises of one subdivision, three tahasils and seven blocks The district is studded with many small & big hills of which Singaraja (1516m), Mahendragiri (1501m) and Devagiri (1382m) are the highest peaks. Two rivers originate from the top of the hill flowing in opposite directions, one through Paralakhemundi, the district headquarter and other through Andhra Pradesh.

Sal (Shorea robusta), Asam (termination tomentosa), Piasal (Pterocarpus marsupium), Halonda (Haldina cordifolia), Arjuna (Termination arjuna), Mahula (Madhuca indica) are some of the principal species of trees found in this district. Among wild animals, elephant, leopard, hyena, wild bear, dear, antelope, peacock and varieties of other terrestrial animals and birds are present. The oldest aboriginal tribes - Saura, Khond, Pulian, Lodha, Dora, Godaba and Jutagu inhabit the forests

In general, the people of these hilly area are very poor. They collect roots, leaves, fruits, honey, mohua, khajuri rasa (date pulm juice) fire wood and other minor forest products. They grow hill paddy, ragi, horse gram, cow pea, til, pigeon pea, maize etc by doing 'Podu' (shifting farming) cultivation.

The Gumma block is situated 30Km away from Paralakhemundi town. Bhubani Ashram school is situated at the top of a flat hilly area and it is 7 Km away from Gumma block. Seranga Primary school is 5 Km away from Bhubani Ashram school. Seranga is a place where hardly the sun shines. It is always

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cloudy and in winter full of fog. It is called the hill station of the Gajapati district Communication facility to Seranga from Paralakhemundi is not adequate. Hardly two buses ply from Paralakhemundi to Seranga. It is a malaria prone area. All the three schools under Gumma block are co-educational. Almost all the tribal families have adopted Christianity. For their livelihood they mainly depend on the forest products and to some extent on agriculture, and cattle rearing. The socio-economic status of almost all the families are below poverty line. During personal interview it was revealed that due to incentives provided by the local Church authorities, there is rapid conversion from Hinduism to Christianity. However they obey tribal customs. The tribals take flesh of different animals and birds. They even eat the flesh of cow and buffalo. All most all families keep dried meat for consumption.

The other five tribal blocks have better communication facilities compared to Gumma block. Although almost 30% of the family have adopted Christianity however the rest belong to different primitive tribes. They have their own culture, tradition and belief. In these blocks most of the families are below poverty line. Around 10% of the families have better standard of living.

In all these tribal areas education of girls has no importance. In Orissa, there are wide gender differentials at all levels of education. Because of a mix of economic and cultural factors fewer girls than boys have access to education and generally the girls are engaged in household work.

A survey conducted by UNICEF in the year 1988 showed that in rural area of every 100 girls who enrol in class-I only 40 remain in class-V and only 16 go on to complete class-X. The two principal reasons that deny girls access to education in our country are.

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- Poverty

- Traditional belief that education is of little use to girls whose only destiny is marriage and motherhood.

- These possible reasons are also applicable to the tribals.

2.5 : Tools Used :

2.5.1 : Tools

To test the hypotheses of the research study, data is to be collected. There are three major ways to collect data

- administer a standardized instrument
- administer a self developed instrument,
- record naturally available data

For the present study all the three strategies were used Keeping in view the time and financial constraints, availability of appropriate standardized tests, the scoring procedure and ease to interpret the statistical analysis, the following tools were chosen for the present study.

- Science Reasoning Task (1978) by CSMS group, Chelsea College, London.

- Creativity test (1991) by M.A. Sudhir.

- Study Habit Inventory (1983) by Sansanwal and Mukhopadhaya

- Children's personality questionnaire (1963) by Porter & Cattel

- Attitude towards science learning (1999) by M. Mahapatra and J K. Mohapatra

- Science achievement test (1999) by M Mahapatra and S. Sarangi.

First four tests were standardized tests and the last two tests were developed by the researchers. For personal data and demographic data the researchers relied upon the data available with the head of the institution and data collected by using questionnaire.   .

1) Assessment of Cognitive Developmental Stage :

The task used to assess cognitive development stage was developed by the CSMS (Concepts in Secondary Maths and Science) at Chelsea College, University of London during the period 1973-78. These tasks are called Science Reasoning Tasks (SRTs) which can be administered to a group of pupils in a classroom situation and the piagetian developmental level of each child can be ascertained. The rationale for chosing the task entitled "Volume and Heaviness" is as follows :

— It contains test items from early concrete to early formal cognitive development stage and the class-V students are likely to be in these cognitive development level.

— The task requires very simple equipments for step wise demonstration of different items

— The reliability and validity of SRTs under Indian conditions have been verified by Mahapatra and Mahapatra (1997).

2) Assessment of Creativity :

After suitable linguistic modifications Sudhir's creativity test meant for tribal children was being used to assess the verbal and non-verbal, creativity of the children. The value of coefficients of correlation (0.83 for the whole test; 0 62 seeing problem test; 0.89 unusual uses test, 0.69 consequences test; 0.85 making

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things interesting, 0 65 similarities, 0.82 picture construction; 0 63 picture completion and 0 86 circles test) all are significant at 0 01 level. This gives credence to accept this creativity test as a reliable tool. Further test-retest reliabilities as the factor scores (Fluency, 0.65; flexibility, 0 61, originality 0.68; elaboration 0.55) were also found to be highly significant, thus adding to the acceptance of this test's reliability

Sudhir's test of creativity consists of five verbal and three non-verbal subtests. Sudhir's verbal form of creativity tests are :

(i) Seeing problem test :

In this type of activities the subject is encouraged to write down the problems that will be faced by him/her while using the given things. The things are like TV, gun and a thatched house. Six minutes time is given to complete the test.

(ii) Unusual uses test :

In this type of activities the students are encouraged to write down the different uses of the given thing. They are encouraged to write unusual uses of the things. Things were bamboo, bottle gourd, basket. For three items 12 minutes time is allowed.

(iii) Consequences test :

The students are supposed to write what will happen if some situation arises

        Example   – What may happen if all the people started dancing ?

                   – What may happen if it did not rain at all ?

(iv) Making things more interesting and useful :

Under this there are two activities and 10 minutes time is allowed. The pupils are advised to stop writing when time is over. They are instructed to try and think of answers that his/her friends may not have thought of. A toy propeller and a toy cart are given to you, how you can make it more interesting and useful.

(v) Similarities test :

Two objects having various similarities and relations are given and the students are asked to write down their similarities. Eight minute time is allowed and students are asked to write down similarities for two pairs like (i) fish and frog. (ii) flower and tree.

Activity VI, VII and VIII constitutes non-verbal creativity test.

(vi) Picture construction test :

In this test two simple drawings are given. Using them the students are asked to complete picture and try to make it very interesting and original They are also asked to give a very interesting title for the picture. Time allowed is 10 minutes.

(vii) Picture completion test :

In this test two incomplete figures are given. The students are asked to complete them so that the pictures are interesting and unusual. The students are also asked to give title to the completed pictures. Six minutes time is given for this activity

(viii) Circles test :

Twenty number of circles are given and the students are asked to draw picture within five minutes inside the circles

If the figures are not clear the students are asked to write the title next to it.

3) Assessment of study habit :

The Study Habit Inventory (SHI) developed by M Mukhopadhaya and D.N Sansanwal was used to assess the study habit of the pupils after suitable modification and translation. This questionnaire contains series of statements pertaining to different aspects of study habits Each item refers to some kind of study habit or other. Likert's five point scale is being used in this questionnaire. However to avoid confusion the researcher in the modified version of the SHI converted Likert's five point scale to three point scale. The students are requested to give their opinion in one of the three boxes meant for – always, sometimes, never, against the statements. SHI have been considered to be constituted of nine different kind of behaviours as follows :

– Comprehension : There are certain specific behaviours with respect to a student's study behaviour which are geared to better comprehension. For example, before reading a lesson intensively the student may try to catch on what the lesson is about. By doing so he/she may try to establish a mental set for studying a particular content.

– Concentration : Concentration is a very important predictor of effective study habits Some students are capable of concentrating easily and for long, some other take time to concentrate, but once they concentrate, they constitute for long Some can never concentrate. For some it depends on mood Others require tea, coffee, smoking etc. for concentrating.

– Task orientation . If a student who has to study a series of subjects and has to develop different levels of cognition, the task orientation is an important component of study habits For example, some students study different subject according to the fixed routine Certain students fix time limit to complete certain subjects and so on.

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–   Sets . By study sets here it is the physical and situational characteristics which a student adopts for study. For example, some students read only at night; some students like to listen to the music and read whereas some other read only if the room is well ventilated.

–   Interaction : Interaction of a student with his teacher, parents or friends contributes positively towards better learning. Hence interaction is a significant component of study habit. For example, when a student does not understand while studying he may go to his friends/teacher/parents for a discussion.

–   Drilling : Drilling means practising a particular learning again and again. Drilling is an important component of learning and plays a significant role in forming specific study habit. Without practice one can not be perfect in any subject.

–   Supports : Study in any particular discipline gets a sound backup from a broader study base. A student's habit of studying different types of books other than text books may be helpful in the learning of his subject.

–   Recording : Preparing notes on the basis of classroom teaching or using supplementary materials is an important study habit.

–   Language : Language capability is an important predictor of effective study habits. For example if language problem is there i.e. if the student is not well versed with the language it affects his concentration, comprehension and duration of study.

The Study Habit Inventory contains 52 items.

The reliability of the whole inventory was worked out by using split-half method and the reliability co-efficient is found to be .91.

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4) Assessment of personality :

To assess the personality of the pupils the Oriya version of CPQ (Children's Personality Questionnaire) developed by Rutherford B Porter and Raymond B Cattell (1963) was used This test is primarily intended for an age range of eight to twelve years. CPQ measures a set of fourteen factorially independent dimensions of personality. The assessment of personality has clinical, educational and counselling implications In this study only one trait of personality i.e. extrovert or introvert has been measured. The child who scores high on this trait is a socially outgoing, uninhibited person, good at making and maintaining interpersonal contacts, sociable, optimistic, impulsive and jolly. The child who scores low on this trait tends to be shy, restrained, inhibited in interpersonal contacts, quiet, reserved, disciplined and well ordered. This questionnaire presents lists of statements describing behaviours characteristic of certain personality traits, and the individual is asked to indicate whether the statement describe him or her. An individuals score is based on the number of responses characteristics of the trait being measured

CPQ is available in four equivalent forms labelled as forms A, B, C and D. For conformity these equivalent tests are necessary. The same CPQ form may be administered on the same sample after allowing a time gap of one week preferably. For our purpose we have taken form `A' consists of part A_1 and part A_2 Each part consists of seventy items. For each trait of personality there are five items Validity coefficient of personality factor (H) which measures the extrovert/ introvert trait Is 0 87. Reliability of form A for the same trait is 0 58.

5) Assessment of attitude towards science learning :

Attitude scale attempts to determine what an individual believes, perceives or feels. Attitude can be measured towards self, other, and a variety of other activities, institution and situation. The Likert type of scale in Oriya consisting of 50 items developed by Mahapatra and Mohapatra was used for measuring attitude of class-V pupils towards science learning. The questionnaire contains almost equal number of favourable and unfavourable statements (27 items are favourable and 23 items are unfavourable). Every item has three alternatives for responses i.e. always, sometimes and never. The scale value for favourable statement was taken to be 2, 1, 0 and for unfavourable statement is 0, 1, 2. The statements in the scale cover different aspects of attitude towards science such as utility and rationality of science, belief in progress, universalism etc. The content validity was tested by taking the opinion of a group of experts. The reliability coefficient is found to be 0.84.

6) Achievement test :

Achievement tests measure the current status of individuals with respect to proficiency in given areas of knowledge or skill Most tests used in schools are achievement tests They are particularly helpful in determining individual or group status in academic learning. Successful learning in science requires cognitive abilities such as intelligence and aptitude for science together with non-cognitive traits like motivation, interests, attitude etc A science achievement test was developed in Oriya for class-V students. The tool contains 50 items and all the questions were from the science book prescribed for class-V. The content validity was tested by a group of five practising teachers working in different schools of Bhubaneswar. The

necessary modifications were done by taking the opinion of the experts The reliability of the achievement test was calculated by using split half technique and found to be 0 87 and the validity coefficient was found to be 0.76.

Each question contains four alternative responses. Maximum marks allowed for right response was one and for the wrong answer zero

While developing/adopting all these tools certain basic things like the syllabus, the culture, problems related to daily life, medium of instruction, language, were taken into consideration.

All the tools used for data collection are given in the annexure.

2.5.2 : Administration of the Tools and Scoring :

Before the administration of the tests the pupils were explained about the aims and objectives of the tests. The personal data of the pupils were collected and the test administrator tried to be familiar with the pupils by telling some stories and jokes A relaxed class room environment was maintained All the tests were administered in the presence of the class teacher. The pupils were requested not to discuss and give their unbiased opinion/response. In the tribal area certain terms used in Oriya language were not understood by the pupils hence the concerned teacher was requested to take care of such situation. The pupils were requested to answer all the test items

The administration and scoring procedure for each test is being discussed below ·

(i) Science reasoning task :

Administration procedure : To assess the congnitive development stage of each pupil in a classroom situation, the Oriya version of the test was being administered. For administration, the administrator had allowed twenty minutes more time than the prescribed time For the administration of the test stepwise demonstration was done. For the demonstration the following equipments were used.

– Glass trough or metal tray.

– 1000 cm^3, 500 cm^3 & 100 cm^3, measuring cylinder.

– Some grains of maize and some popcorn. (To make the popcorn in the class room a electrically operated popcorn maker was used).

– 1 cm^3 wooden cubes, 17 in number

– (5x4x3) cm^3 Iron block.

– 2 lumps of plasticine having volume (5x4x3) cm^3.

– Glass boxes, with one face open, having dimension (10x10x10) cm^3 and (20x10x10) cm^3.

– 100 cm^3 & 250 cm^3 two glass beakers.

– Two feet stout thread

– Burner, tripod & gauze.

The pupils were instructed to observe the demonstration carefully before attempting the items.

Scoring : The prescribed scoring procedure was followed for scoring. Weightage `I' for adequate and `O' for inadequate response was given. For scoring class assessment sheet was used. The following stages of cognitive development were assigned to the students according to the number of items they have attempted correctly.

SI.	Number of correct response	Stage assigned
(i)	At least two 3A item correct	3A
(ii)	At least three 2B/3A or 3A item	2B/3A
(iii)	Only two 2B/3A items correct, provided four or more 2B items correct	2B/3A
(iv)	Five or more 2B items correct	2B
(v)	Any four 2B or higher items correct	2A/2B
(vi)	At least two 2A items and three 2B or higher items correct	2A/2B
(vii)	Three 2A items correct, and two 2B or higher items correct	2A/2B
(viii)	Any two 2A items correct	2A
(ix)	One 2A item, and three 2B or higher items correct	2A

2A, 2A/2B, 2B, 2B/3A and 3A represent the following cognitive development stages.

'2A' — Early concrete stage of cognitive development.

'2A/2B' — Transition stage between early concrete and late concrete.

'2B' — Late concrete stage of cognitive development.

'2B/3A' — Transition stage between late concrete and early formal stage of cognitive development.

'3A' — Early formal stage of cognitive development.

There were fourteen items in SRT and each item measures a particular development stage. The table 2.1 depicts the number of items measuring a particular cognitive development stage.

Table 2.1 : Number of items in each cognitive development stages

Cognitive development stage	Question numbers	Total number of items
2A	1,2,3	3
2B	3b,5,6,7,8,9,11	7
2B/3A	10,13a	2
3A	12A, 12B, 13B, 14	4

Question number 3,12,13 has two parts like (3a, 3b); (12a, 12b); & (13a, 13b). The number of responses answered correctly by the students were counted and using the scoring rule final cognitive development stage of the child was ascertained. For statistical analysis purpose the nominal scale of the stages are converted to an equal interval scale. The following numbers were assigned to different stages.

2A	1
$\dfrac{2A}{2B}$	1.5
2B	2
$\dfrac{2B}{3A}$	2.5
3A	3

(ii) Creativity test :

Administration of creativity test : Total time allowed for the test is 63 minutes however the researcher had allowed 75 minutes to complete the test. The pupils were asked to follow the stipulated time schedule At the begining of each test objective of each test item and how to proceed was outlined. To answer the seeing problem test the students were given 6 minutes. The test contains three items hence every two minutes the children were informed that the time is over.

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The children were asked to go to the next item Likewise the students were instructed to follow the instructions given by the test administrator. Under non-verbal test the children were supposed to draw many figures. The children were requested to use pencil for the drawing. The children were very happy to have a test of this kind which was quite different from their regular tests.

Scoring : The scoring for the test was done in a systematic manner The scoring was done for four factors of creativity like – fluency, flexibility, originality and elaboration.

Fluency : In scoring for fluency, irrelevant responses and repetitions were deleted first. The remaining number of responses were counted and entered as the fluency score

Flexibility : All responses belonging to the same approach thought or trend were considered as one category The number of categories made up the flexibility score.

Originality : Uncommonness in responses i e the responses given by less than 5% of the students were scored for originality All others were given no weightage. The relative weightage for originality scoring was as follows ·

Percent of response	Originality weighting
0.1% to 0.99%	5
1% to 1.99%	4
2% to 2.99%	3
3% to 3.99%	2
4% to 4.99%	1
5% and above	-

Elaboration : The non-verbal tests i.e activities VI, VII & VIII were considered for scores on the creativity factor, elaboration. The ability to add relevant and meaningful details to the response to the figural stimulus was appraised. If the figure was not relevant and meaningful, it was ignored The total elaboration score consisted of a score of one for primary response plus 1 score for each additional details.

The scores on fluency, flexibility, originality and elaboration on different activities obtained by students were added to obtain the total scores on the four components of creativity. The composite creativity score was calculated by adding the scores for verbal & non-verbal creativity by tests.

In this test there is no limit for maximum marks.

(iii) Study habit inventory :

Administration : One hour time was allowed to complete the test. The children were asked to indicate their responses simply by ticking cross (x) in any of the cells. The test administrator to help the pupils had read out loudly all the items one after the other. Sufficient time was given to complete the test. The pupils were enthusiastic to answer the test items because the test items are quite different as it seeks answer to what they do while reading.

Scoring : In the questionnaire there are two types of items (i) Negative, and (ii) Positive. Every item had three alternatives for responses as "Always", "Sometimes", and "Never" Total number of items were 52 out of which question number − 2, 5, 6, 8, 9, 13, 14, 29, 30, 32, 38, 49, 22, 7, 12, 34, 3, 46, 4, 50, 31, 43, 11, 27, 15, 44, 39, 51, 23, 24, 25 & 41 are positive in nature and the rest are negative in nature. Thus there are 32 positive items and 20 number of

negative items For positive items, the individual who has crossed a particular item as always was given two, and if crossed never then weightage given was zero. Thus the scoring procedure followed was

for positive items – 2, 1, 0

for negative items – 0, 1, 2.

(iv) Children personality questionnaire (CPQ) :

Administration : The test is generally administered without a time limit, however for younger children it is better to fix a time limit. The children were asked to read each statement and mark cross (X) on the side that fits him/her better. The children were encouraged to ask for help if they do not know the meaning of a word. The children were asked to answer all the questions. For better response the test administrator had read aloud the entire test. The test administrator had read the first question, then asked them to answer, then to the second question & so on

The particular items which defines each factor are listed in the CPQ tabular supplement. From the Tabular supplement it was found out that the question numbers 32, 36, 40, 44 and 48 in form A_1 and A_2 of CPQ measures the H-trait. Twenty minutes time was allowed to complete the test because the pupils were asked to answer only those ten questions which measures the trait under consideration

Scoring : For scoring of CPQ one may use either machine scoring of the separate answer sheet or hand scoring. For our purpose we followed the hand scoring procedure The general guidelines for scoring are :

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–   One response has to be marked for each item

–   Any form that show obvious response pattern such as all of the answers in one column or regular alternation of left and right responses are to be rejected.

–   All the items are to be answered

Out of the ten items used to assess the H-factor of personality the scoring key was used and scoring given was 2 & 1 which depends on the type of question.

(v) Attitude towards science learning :

Administration : The students were allowed one hour time to complete all the fifty items given in the test. The pupils were asked to cross in the appropriate box. Every item was related to day to day activities of the pupils.

Scoring : In the questionnaire, there are two types of items, namely (i) Negative, and (ii) positive. For negative statements the weightage given to the responses viz. always, some time and never are 0, 1 & 2 respectively. For positive statements the scoring was in the reverse order 2, 1 & 0 respectively for responses always, some time & never.

(vi) Achievement test in science :

Administration : One hour time was allowed to complete this test. The pupils were acquainted with such type of test, hence they need no assistance to complete the test. Few students could complete the test much before the stipulated time. During this test it was observed that, discussion amongst the pupils increased

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considerably The test administrator had taken appropriate steps to check discussion and cheating amongst the students. The test consisted of fifty items and each item had four alternative responses

Scoring : For correct response weightage given was `1' and for wrong response weightage given was `0'

2.6 : Collection of Data :

Firstly, the principal investigator approached the authorities of Tribal Welfare Department, Government of Orissa, Bhubaneswar and the Harijan & Tribal Research Training Center, Bhubaneswar for information about the different tribes of Orissa, the concentration of tribal population in different tribal belts. The educational facilities rendered to the tribals by the government and private agencies (NGOs) were assessed The Information about the statistics of the Ashram & Sevashram schools and communication facilities from the district head quarters were also obtained. After examining the suitability of Gajapati district for data collection letters were written to the appropriate authorities of schools for permission to conduct research studies in different schools of the district. Before proceeding for the field study sufficient copies of the tools were printed. Equipments for stepwise demonstration of the science reasoning task were arranged in a kit. The demonstration for the test was practised several times in a simulated situation for better performance

The researcher reached Paralakhemundi the district head quarter of Gajapati district, for the field study. In most of the places where the schools for the data collection were identified lodging facility was not available. The researcher had to commute to different schools by bus. In some of the places like Mohana,

the BDO's have rendered their help and provided the researcher with lodging facility. To go to the interior places the researcher had taken the help of the local people and block administration. The staff of the block administration rendered their cooperation and help.

The researcher collected the data with lot of difficulty. In some of the schools the students did not understand even Oriya language perfectly Under such circumstances the researcher had taken the help of the class teacher or the subject teacher. The concerned teachers were requested to explain the pupils the difficult terms/words in their dialect. The aim and objectives of the research project was explained to the teachers, headmasters and the pupils of different schools. With the cooperation of the teachers and students it was possible in our part to conduct such a vast research study. To administer the six different tests the researcher had to visit each school for at least ten to twelve days.

The personal data like the name of the student, family size, gender, income of the parents, parental education age etc. were collected by using questionnaire. About the performance of the students and some demographic data the researcher had to rely on the data available in the school office.

To collect data about the pupils believing superstition or not the following procedure was followed ·

After reaching the identified village the researcher by interacting with the villagers collected the common believes among the tribals (villagers). These common believes are also called superstitions which are deep rooted,

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unreasonable and irrational beliefs, which have no profundity These superstitions are inherited from generation to generation Ten such superstitions followed by the tribals of that area are

- Moon is faminine and the sun is masculine in gender.

- Woman are inferior to men in all respect.

- There will be no rainfall if women will touch the plough

- To see a jackal while starting for a place is a sign of good luck.

- When there is no rainfall, it will rain if you start a ceremonial fire or, sacrifice a bufallo.

- If you peg an iron net or nails in front of your house after a man dies then it will not be visible by evil spirits.

- One should always worship the god of earth (called by Sauras as Lajabojang) before you reap your harvest.

- If you blow the whistle inauspicious stars (Grahas) would gather around.

- On full moon & new moon day one should not eat good food.

- The sitting of a vultur on the roof is a bad omen.

These beliefs were written on a roller black board and at the beginning of the test session the test administrator had explained how these beliefs are not scientific. A gap of ten to twelve days was given. At the end of all the tests they were asked to write down and submit whether they believe in superstition or not ?

To generate interest and curiosity the test 'SRT' which is being associated with step wise demonstration of different test items was administered first. During the administration of the tests cheating and discussion amongst the students were prohibited. Before administration of the tests the purpose and utility of the tests were informed to the students It was clearly mentioned by the test administrator that the tests would be conducted just to know their opinion and are no way connected to their examination. The students were requested to give free and frank response as the result would be kept confidential. The pupils were requested to answer all the test items otherwise their answer scripts would be rejected.

2.7 : Statistical Techniques Used :

The collected data after following appropriate scoring procedure was noted down. For each school a separate sheet was used. For each students the data was entered under the headings viz. age, gender, parents income, father's education, mother's education, believing superstition or not, score for cognitive development stage, creativity score, score for personality, score for study habit inventory, score for attitude towards science learning, and achievement test score were recorded. For creativity again score was entered under four heading like fluency, flexibility, originality and elaboration. For all these test raw scores were entered

The collected data was fed to the computer for statistical analysis. The following statistical procedures were adopted for the analysis of the data.

(a)   To find out the differences between different variables for boys, girls or tribal, non-tribal, the 't' test was applied to findout the significant differences between various groups.

(b)   To test the difference between two sample proportions Z test statistics was used

(c)   For certain variables degree of relationship was measured by finding out the coefficient of correlation, between different variables.

(d)   This research study involves more than three variables hence it is being decided to analyse the problem using multiple regression Multiple regression is being used as an alternative to the various analysis of variance techniques. The result indicate not only the relation between the variables but also the magnitude of the relationship.

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STATISTICAL ANALYSIS & INTERPRETATION

3.1 : Introduction :

Statistics is a branch of scientific methodology By direct inspection of the collected data one can not reliably ascertain the conclusions Statistics enable us to analyse the collected data and arrive at interpretations which fairly reflect the behaviour of the universe. In the present study answer to different research questions were obtained by statistical analysis of the collected data.

3.2 : Research Questions :

The research questions examined are as follows .

3.2.1 : Research Question No.1 :

Do the tribal pupils having the same chronological age belong to the same piagetian stage ?

To seek answer to this question the data collected using SRT was used The table 3.1a depicts the number and percentage of tribal pupils of class-V at different piagetian stages. The gender wise distribution of piagetian stages among the tribal pupils is also being given in the table 3.1a.

Table-3 1a .   Percentage of tribal pupils of class-V in different piagetian stages gender wise (Age : all pupils 10+ years)

Sl.No	Piagetian stages (PS)	No. of Boys in each PS (B)	No. of Girls in each PS (G)	No of Pupils in each PS (B+G)	% of Boys in each PS	% of Girls in each PS	% of total pupils in each PS
1	2A	8	2	10	2.89	0.95	2.06
2	2A/2B	68	60	128	24 63	28.50	26 34
3	2B	90	82	172	32.60	39.04	35.39
4	2B/3A	36	16	52	13.04	7.61	10 7
5	3A	74	50	124	26.81	23.8	25.51
	Total	276	210	486			

The total numbers of tribal boys and girls taken as sample were 276 and 210 respectively. Using the data of table 3.1a the percentage distribution of tribal pupils amongst stages is being depicted in Fig.3.1. Fig.3.2 shows percentage of boys and girls in different piagetian stages

Fig.3 1 reveals that the tribal pupils of class-V though have the same chronological age (i.e 10+ years) still belong to different piagetian stages Maximum number of pupils of class-V are in 2B stage i.e in the late concrete stage of cognitive development and least number of pupils are in 2A stage i.e. in early concrete stage of development.

To see the significance of the difference between proportion of tribal boys and girls with regard to their cognitive development 'Z' test was applied.

The test statistics :

$$\overset{*}{Z} = \frac{P_1 - P_2}{\sqrt{P(1-P)(\frac{1}{n_1} + \frac{1}{n_2})}}$$

Where $P = \dfrac{n_1 P_1 + n_2 P_2}{n_1 + n_2}$

P_1 = Proportion of boys having a particular cognitive development level.

P_2 = Proportion of girls having the same cognitive development.

n_1 = Number of boys.

n_2 = Number of girls.

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* *Advanced level statistics, An integrated course, A. Francis, Stanley Thornes (Publishers) Ltd Page No.551*
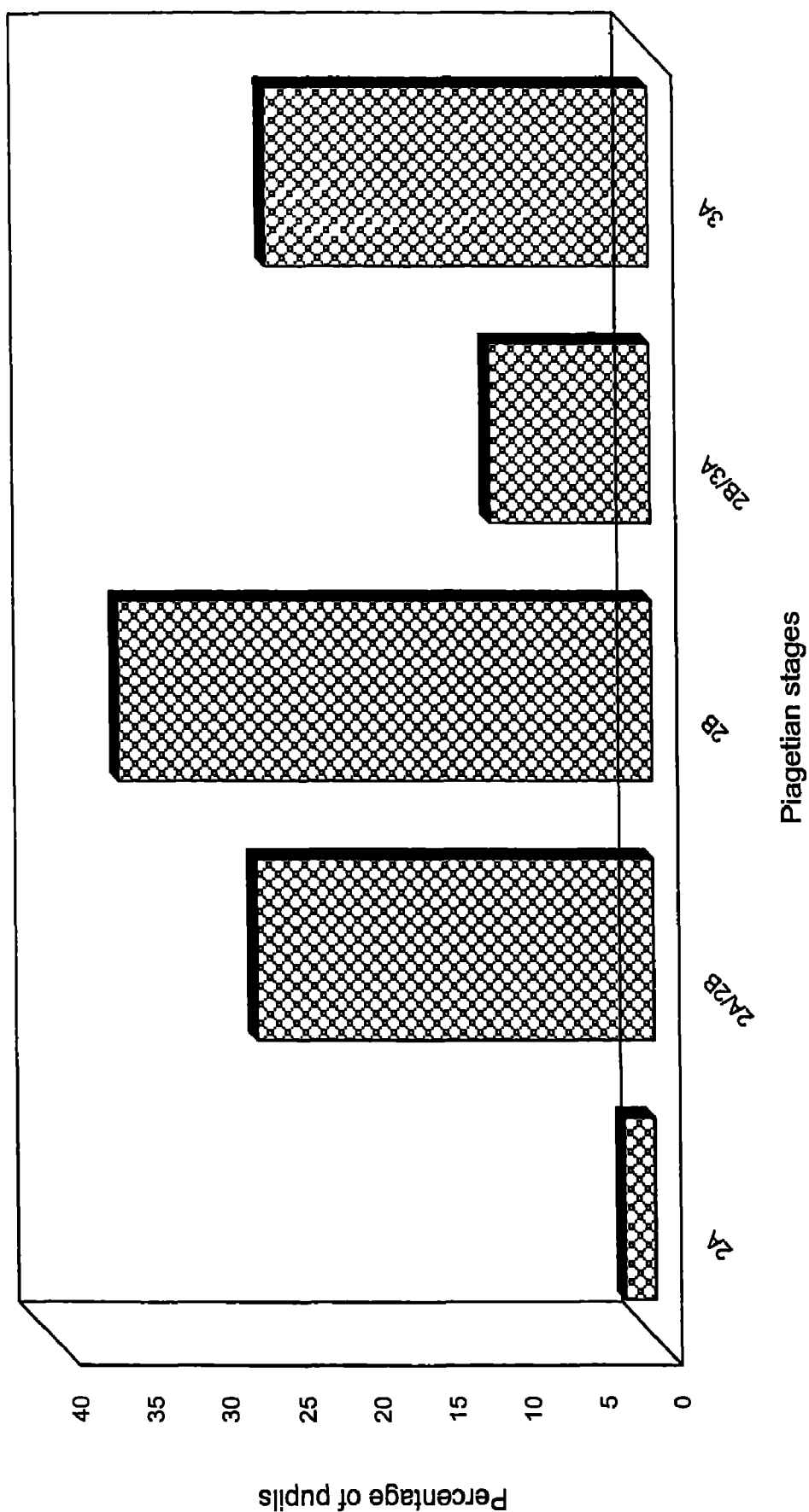
Fig.3.1. Distribution of tribal pupils amongst stages of cognitive development.
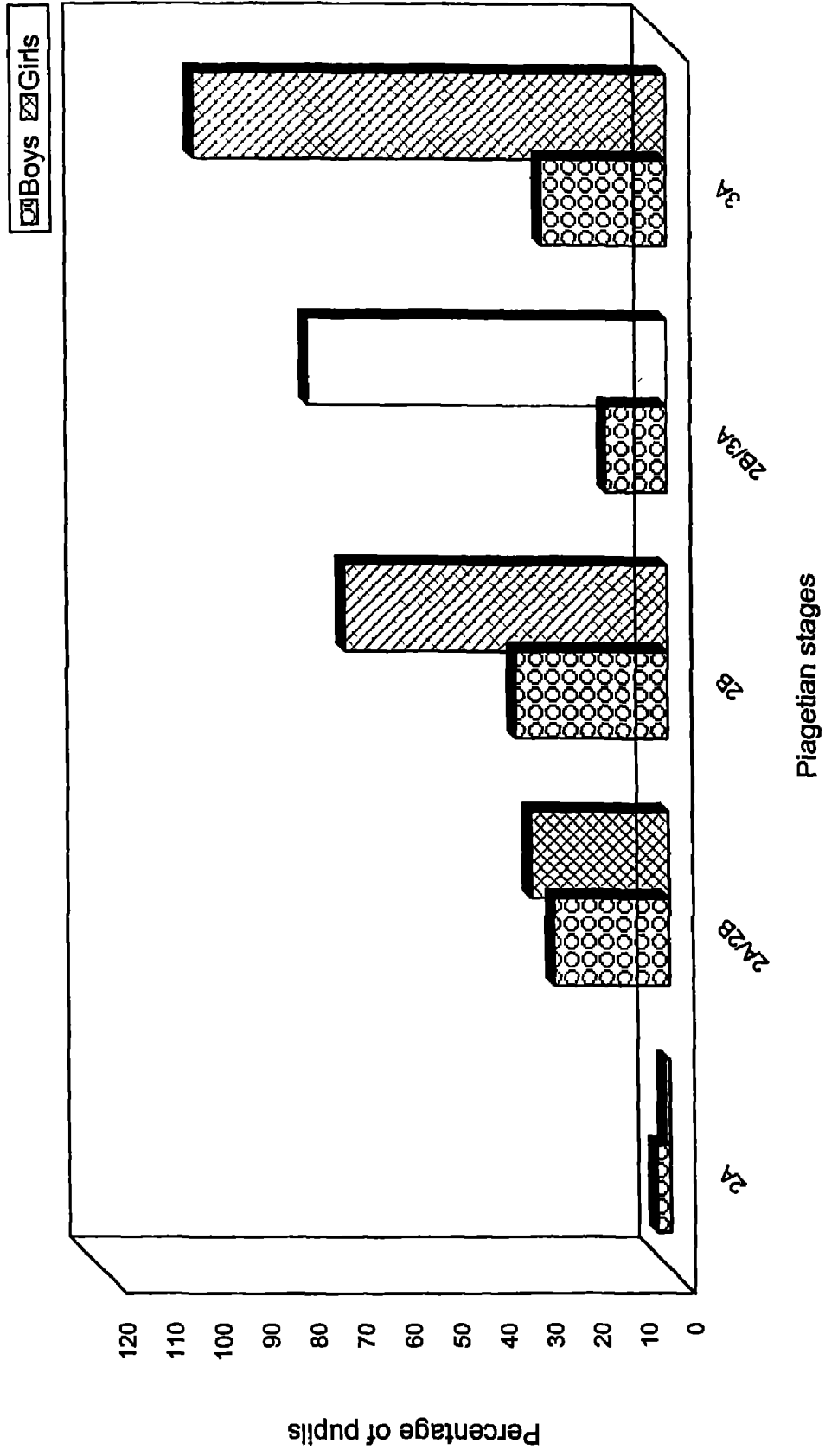
Fig.3.2. Gender wise distribution of tribal pupils amongst stages of cognitive development

The calculated value of `Z' for different cognitive stages are tabulated in table 3 1b.

Table-3.1b · `Z' value for tribal boys & girls.

Stage	2A	2A/2B	2B	2B/3A	3A
`Z' Value	1 502**	.982**	467**	2 53*	.758**

** Not significant
* Significant at .05 level

Comparing the table value or standard value Z with calculated value of Z it is clear that the difference is significant only at 2B/3A level and the level of significance is .05 From this one can perhaps conclude that the percentage of boys and girls do not differ significantly at different stages at cognitives development except at 2B/3A stage.

3.2.2 : Research Question No.2 :

Is there any difference between the cognitive development stages of the tribal and non-tribal pupils belonging to the same age group ?

To ascertain this aspect the following steps are to be followed.

- Ascertain piagetian stages of the non-tribal pupils and tribal pupils.

- Convert the piagetian stages to equal interval scale as already out lined in chapter-II.

- Mean score of the tribal and non-tribal pupils were calculated.

- Comparison between the cognitive level of the tribal & non-tribal pupils was done by calculating the `t' value

Under the research question no.1, piagetian stages of the tribal was ascertained and 'Z' value was calculated to see whether significant difference exists between the proportion of boys and girls in a particular stage. Here we are going to ascertain the same for the non tribal pupils and then comparison is to be made

Table-3 2a depicts the number and percentage of non-tribal pupil gender wise in each piagetian stage.

Table-3.2a : Percentage of non-tribal pupils in different piagetian stages genderwise.

Sl.No.	Piagetian stages (PS)	No. of Boys in each PS (B)	No. of Girls in each PS (G)	No. of Pupils in each PS (B+G)	% of Boys in each PS	% of Girls In each PS	% of total pupils in each PS (B+G)
1	2A	2	0	2	1.69	0	0.85
2	2A/2B	22	20	42	18.64	16.94	17.80
3	2B	26	42	68	22.03	35.59	28.81
4	2B/3A	20	24	44	16 94	20.33	18 64
5	3A	48	32	80	40 67	27 11	33 90
	Total	118	118	236			

Using the data of the table 3.2a the percentage distribution of pupils amongst the different piagetian stages is depicted in fig.3.3 and gender wise distribution is depicted in fig.3.4.

Fig. 3.3 reveals that nontribal pupils of class-V though belong to the same chronological age i.e. 10+ years still belong to different piagetian stages. Maximum number of nontribal pupils (33%) are in 3A i.e. early formal stage of development.

48
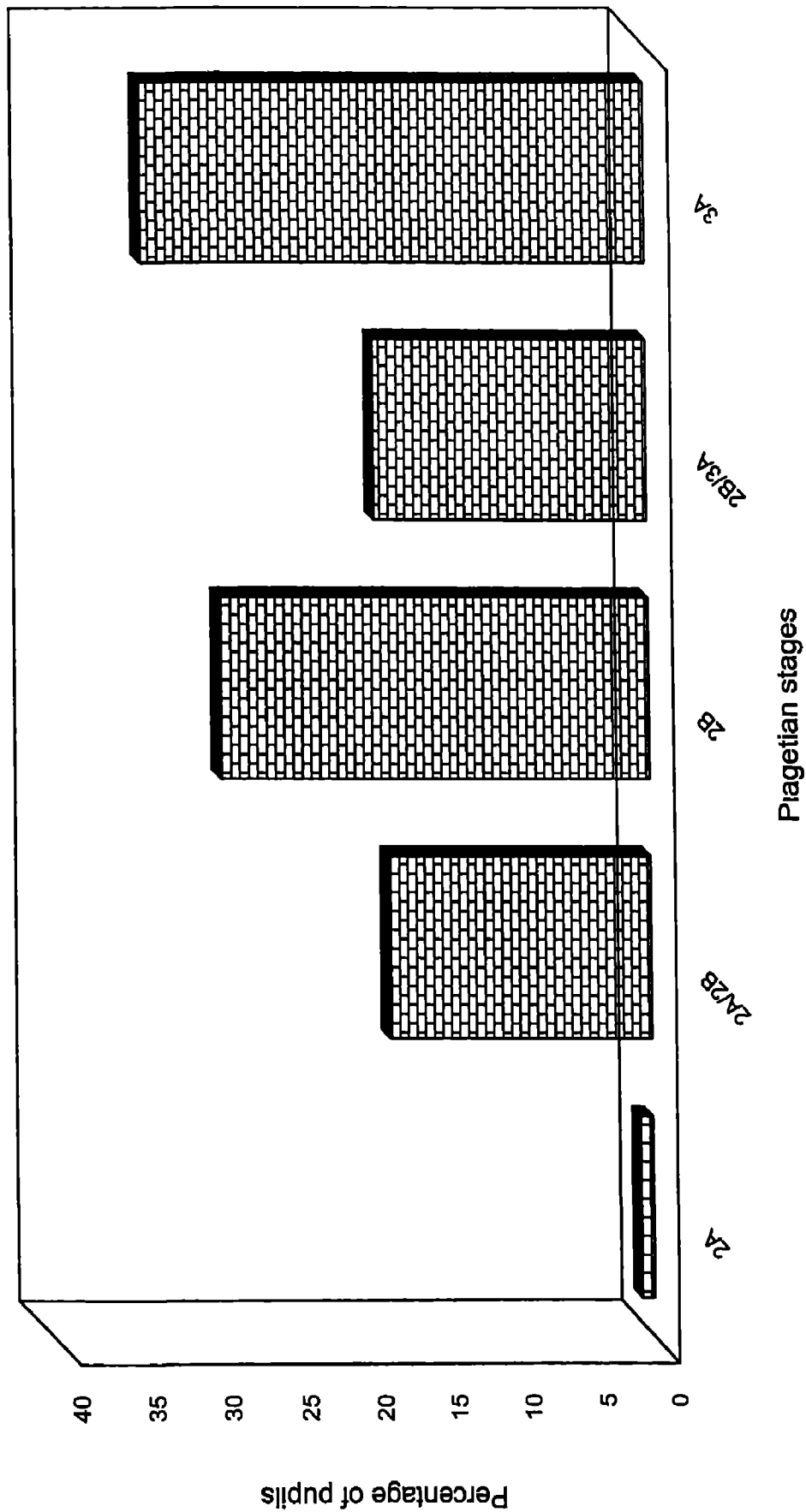
Fig.3.3. Percentage of non-tribal pupils at different piagetian stages
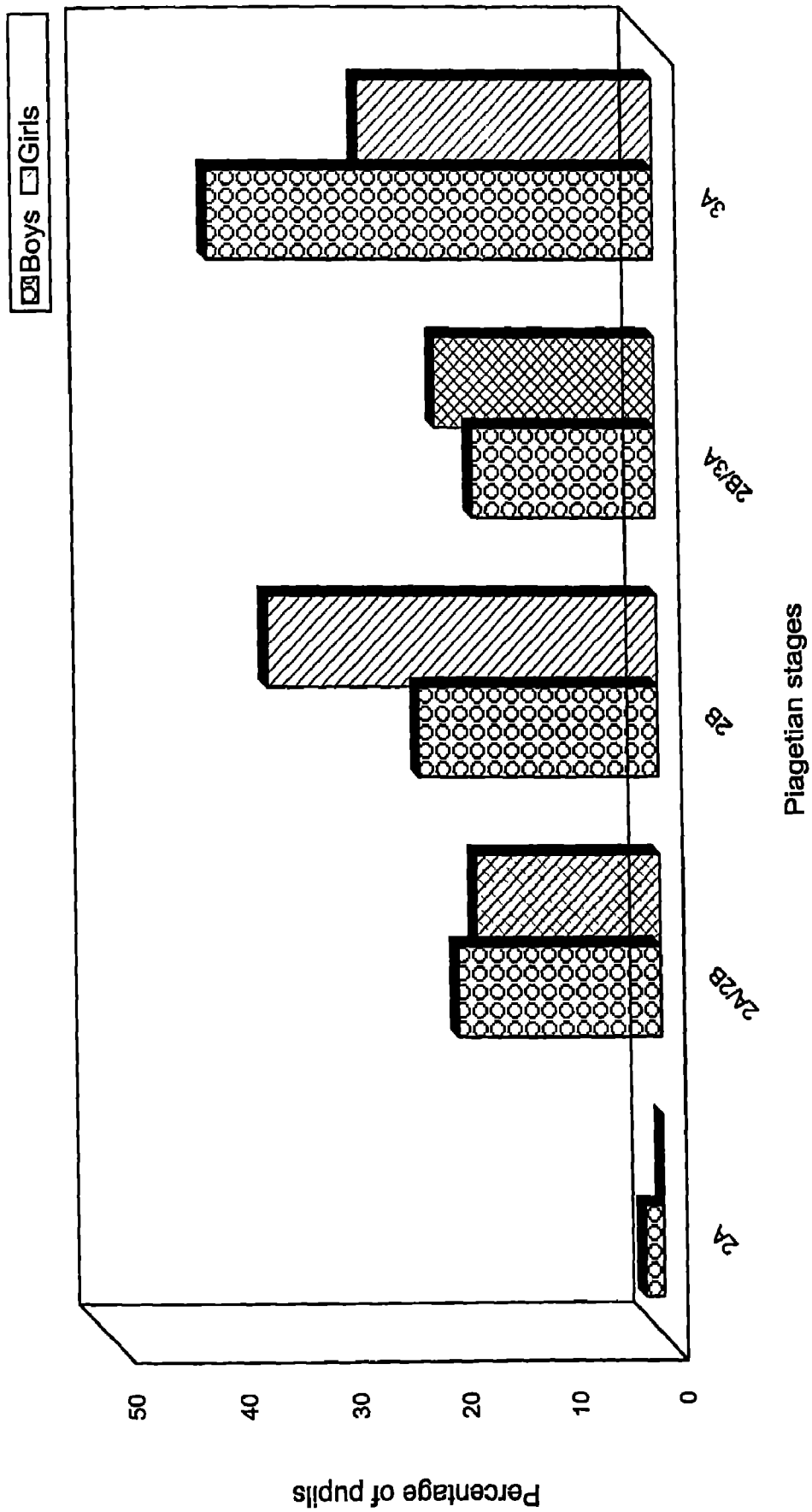
Fig.3.4. Percentage of non-tribal boys and girls in different piagetian stages.

To see the significance of the difference between proportion of boys and girls in a particular stage of cognitive development the 'Z' value was calculated and tabulated in table · 3 2b

Table-3.2b   'Z' value for nontribal boys & girls.

Stage	2A	2A/2B	2B	2B/3A	3A
'Z' Value	1 424**	0 341**	2 303*	0 669**	2.20*

** Not significant
* Significant at .05 level.

Thus the proportion of nontribal boys and girls differ significantly at 05 level in only 2B & 3A stage. In all other stages of cognitive development, the difference in proportion is not significant.

To test the research question one can calculate the 't' value. The 't' value can be calculated using the following formula.

$$t^* = D/SE_D.$$

Where D = Difference between the means

SE_D = Standard error of the difference between uncorrelated means

$$SE_D = \sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2})}$$

Where

σ_1 = Standard deviation for tribal pupils.

N_1 = Number of tribal pupils.

σ_2 = Standard deviation for non-tribal pupils

N_2 = Number of non-tribal pupils.

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* *Statistics in psychology and Education by Henry E Garrett & R.S Woodworth, Vakils, Feffer & Simsons Ltd Page 454*

Table 3.2c depicts the mean scores for cognitive development level and 't' value. 't' value is calculated by knowing σ_1, σ_2, N_1, N_2 & SE_D.

Table 3.2c : t-value for cognitive development level.

Category	No. of pupils (N)	Mean score (M)	S.D (6)	SE_D	t
Tribal	486	3 31	1.17	0 085	4.219
Non-tribal	236	3 67	1.15		

The degrees of freedom = 720. The table value of 't' for the above degree of freedom is 2.326. Thus calculated value of 't' is greater than the table value. Thus there is significant difference between the cognitive development level of the tribal and non-tribal pupils belonging to the same chronological age.

One can critically analyse the existence of differences in cognitive development level of tribal pupils and nontribal pupils by a different technique (Mohapatra & Mohapatra, 1999) namely by calculating the 'Group Cognitive Ability' or (GCA). We have already indicated our justification for converting the nominal scale of stages to an equal interval scale in chapter-II. In that scale we assigned the following number to each stage.

2A	1
2A/2B	1.5
2B	2
2B/3A	2.5
3A	3.

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We then construct a term "Group Cognitive Ability" defined as follows .

$$(GCA)_{ij} = \sum_{K} \frac{P_{ij}^K S_{ij}^K}{100}$$

Where, P_{ij}^K = % of pupils of class-V at a particular stage.

S_{ij}^K = The value of the stage under consideration.

Table 3 3 depicts (GCA) value for tribal & non-tribal pupils.

Table 3 3   GCA for tribal & non-tribal pupils.

Piagetian stages (PS)	% of tribal pupils in different PS*	% of non-tribal pupils in different PS	(GCA) for Tribal pupils	(GCA) for Non-tribal pupils
2A	2.06	0 85	2 1516	2.2415
2A/2B	26.34	17.80		
2B	35.39	28.81		
2B/3A	10.70	18.64		
3A	25.51	33.90		

* PS : Piagetian stages

Thus the GCA of non-tribal pupils are greater than the tribal pupils Thus the nontribal pupils have better cognitive ability than the tribal pupils belonging to the same age group.

Fig.3.5 depicts the percentage of pupils in various stages of cognitive for development tribal & nontribal pupils. The data is given in table 3.3.

The percentage of non-tribal pupils in 3A stage of cognitive development is more than that of the tribal pupils. This indicates that compared to tribal pupils, the non-tribal pupils approach the higher cognitive level faster.

51
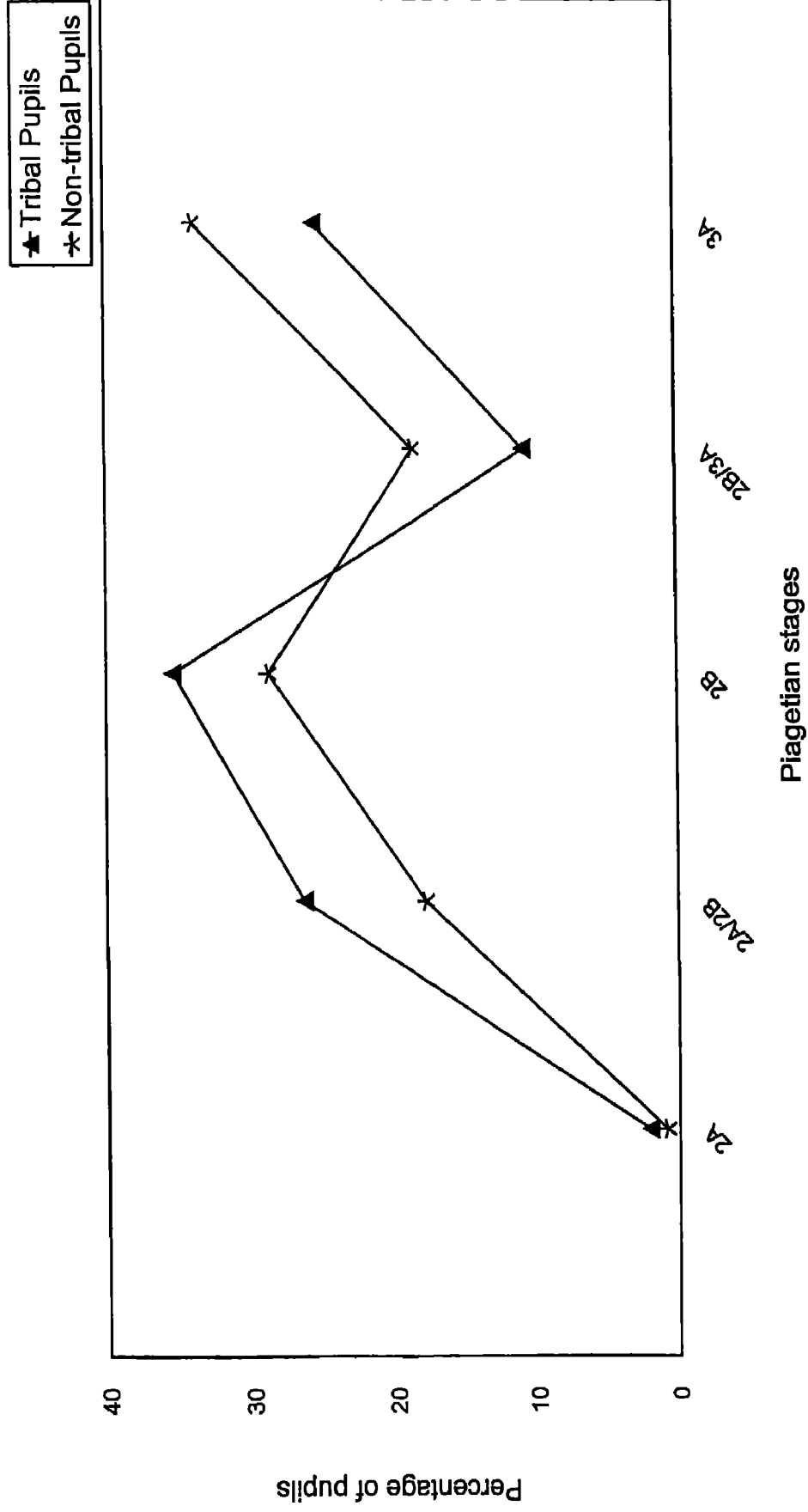
Fig.3.5. Percentage of pupils at various piagetian stages.

From table 3 1a & 3 2a it is seen that both in tribal and nontribal samples maximum percentage of girls are in 2B stage. this may be due to the on set of biological maturity among girls around the age of 10-11 years. This is obviously not the case for boys as reflected in the same table.

3.2.3 : Research Question No.3 :

Is there any difference in the degree of science learning between the tribal & nontribal pupils belonging to the same chronological age

- To measure the degree of science learning the scores in science achievement test were taken into consideration. Table 3.4 depicts the mean, standard deviation, 't' value for tribal and nontribal pupils in science achievement test.

Table 3.4 : t-value for science achievement test.

Category	No of pupils (N)	Mean score (M)	S.D (6)	SE$_D$	t
Tribal	486	19 93	6.70	0.213	18.419
Non-tribal	236	23.86	7.49		

't' value is significant at .01 level. Thus there exists significant difference in the degree of science learning of the tribal and non-tribal pupils belonging to the same chronological age. The non-tribal pupils are superior to tribal pupils as far as achievement in science is concerned.

3.2.4 : Research Question No.4 :

Is there any significant difference between the creativity of the tribal and nontribal pupils ?

The mean score of the composite creativity (verbal + non verbal creativity), SD, SE_D and t-value are depicted in table 3.5

Table 3.5 . t-value for creativity

Category	No of pupils (N)	Mean score (M)	S.D (6)	SE_D	t
Tribal	486	81 01	29.31	0.437	34.057
Non-tribal	236	95.90	30.88		

't' value is significant at .01 level. Thus there exists significant difference between the tribal and nontribal pupils in creativity score and safely one can say that as far as creativity is concerned the nontribal pupils are superior to the tribal pupils of the same chronological age.

3.2.5 : Research Question No.5 :

Does creativity of the tribal pupils affect significantly their degree of science learning ?

If positive correlation exists between creativity and degree of science learning one can say that creativity affect the degree of science learning. Strong relationship is indicated by the magnitude of the correlation coefficient. The formula used for calculating correlation coefficient for ungrouped data is

$$r = \frac{N\,\Sigma xy - \Sigma x\,\Sigma y}{\sqrt{[N\,\Sigma x^2 - (\Sigma x)^2]\,[N\,\Sigma y^2 - (\Sigma y)^2]}}$$

Where r = Correlation coefficient

N = Number of tribal pupils

Σx = Sum of the scores in science achievement test.

Σy = Sum of the scores in creativity test

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The calculated value of r = +0 63 The value of `r' shows that there exists substantial or marked relationship between creativity and degree of science learning of the tribal pupils For 484 df, r = 09 at 05 level & r = .118 at .01 level Thus the calculated alue is r = +0 63 which means that r is significant at .01 level. Thus one can safely say that more creative pupil will do better in science achievement test

3.2.6 : Research Question No.6 :

Do the non-cognitive factors like personality, study habit and attitude differ significantly between tribal and nontribal pupils ?

Personality :

The `t' value showing the tribal and nontribal differences in personality factor is presented in the table 3.6.

Table 3.6 : `t' value for personality factor `H'

Category	No. of pupils (N)	Mean score (M)	S.D (6)	SE$_D$	t
Tribal	486	69.05	5.39	0.174	1.435
Non-tribal	236	68.80	4.55		

The calculated value of `t' is not significant. This implies that there is no difference in the H-factor or H-trait of personality between the tribal and nontribal pupils belonging to the same chronological age.

Study habit :

The `t' value showing the tribal and nontribal difference in study habit is presented in table 3.7.

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Table 3.7 : 't' value for study habit

Category	No. of pupils (N)	Mean score (M)	S.D (δ)	SE$_D$	t
Tribal	486	56 21	9.77	0.247	15.516
Non-tribal	236	60.05	9.71		

The calculated value of t = 15.516 is significant at .01 level. Thus there exists significant difference between the study habit of tribal and nontribal pupils, belonging to same chronological age. The non-tribal pupils have better study habits compared to the tribal pupils.

Attitude towards learning of science :

The 't' value showing the tribal and non-tribal difference with regard to attitude towards science learning is depicted in the table 3.8.

Table-3.8 . 't' value for attitude towards learning of science.

Category	No. of pupils (N)	Mean score (M)	S.D (δ)	SE$_D$	t
Tribal	486	63.71	11.40	0.289	24.489
Non-tribal	236	70.79	14.19		

The calculated value of t = (24 489) which is significant at 0.01 level. Thus as far as attitude towards learning of science is concerned the nontribal pupils possess better attitude towards science learning compared to the tribal pupils belonging to the same age group.

3.2.7 : Research Question No.7 :

Do the non-cognitive factors affect significantly the degree of science learning of the tribal pupils ?

Non-cognitive factors Include the attitude towards science learning, study habit and personality To study the effect of all these non-cognitive factors on degree of science learning of the tribal pupils one has to calculate partial and multiple correlation. The simple correlation between two variables is sometimes misleading and may be erroneous if there is little or no correlation between the variables other than that brought about by their common dependence upon a third or several variables. Since a combination of variables usually results in a more accurate prediction than are variable, prediction studies often result in a prediction equation referred to as a multiple regression equation. A multiple regression equation uses variables that are known to individually predict the criterion to make a more accurate prediction.

To write the multiple regression equation, let say 1 = degree of science learning, 2 = attitude towards science learning, 3 = study habit, and 4 = personality The regression equation with four variables in score form is

$$\overline{\chi}_1 = b_{12\,34}x_2 + b_{13.24}x_3 + b_{14\,23}x_4 + K \quad ....(1)$$

Where K is a constant and $b_{12\,34}$ is the correlation coefficient between the attitude towards science learning (2) and degree of science learning (1), keeping the study habit (3) and personality (4) same or constant. The different terms used in equation (1) are defined as follows .

$$b_{12\,34} = r_{12\,34}\,\frac{\sigma_{1\,234}}{\sigma_{2\,134}}$$

$$b_{13\,24} = r_{13\,24}\,\frac{\sigma_{1\,234}}{\sigma_{3\,124}}$$

$$b_{14\,23} = r_{14\,23}\,\frac{\sigma_{1\,234}}{\sigma_{4\,123}}$$

$$r_{12\,34} = \frac{r_{12\,3} - r_{14\,3}\,r_{24\,3}}{\sqrt{1 - r_{14\,3}^{2}}\,\sqrt{1 - r_{24\,3}^{2}}}$$

$$r_{13\,24} = \frac{r_{13\,2} - r_{14\,2}\,r_{34\,2}}{\sqrt{1 - r_{14\,2}^{2}}\,\sqrt{1 - r_{34\,2}^{2}}}$$

$$r_{14\,23} = \frac{r_{14\,2} - r_{13\,2}\,r_{34\,2}}{\sqrt{1 - r_{13.2}^{2}}\,\sqrt{1 - r_{34\,2}^{2}}}$$

$$r_{12\,3} = \frac{r_{12} - r_{12}\,r_{23}}{\sqrt{1 - r_{13}^{2}}\,\sqrt{1 - r_{23}^{2}}}$$

$$r_{13.2} = \frac{r_{13} - r_{12}\,r_{23}}{\sqrt{1 - r_{12}^{2}}\,\sqrt{1 - r_{23}^{2}}}$$

$$r_{23\,1} = \frac{r_{23} - r_{12}\,r_{13}}{\sqrt{1 - r_{12}^{2}}\,\sqrt{1 - r_{13}^{2}}}$$

The calculated values of simple correlations are tabulated in table no 3.9.

Table 3.9 value of simple correlation coefficients.

r_{12}	r_{13}	r_{14}	r_{23}	r_{24}	r_{34}
0.756	0.679	0.220	0.759	0 270	0.367

The calculated value of the partial correlation coefficients are tabulated in table no.3 10.

Table 3.10 : Value of partial correlation coefficient.

$r_{12\,34}$	$r_{13\,24}$	$r_{14\,23}$	$r_{23\,14}$	$r_{24\,13}$	$r_{34\,12}$
0.50	0.25	-0.04	0.49	0.01	0 26

The calculated value of the coefficient `b' in the regression equation (1) are tabulated in table no.3.11.

Table 3.11 · Value of `b' coefficient.

$b_{12\ 34}$	$b_{13\ 24}$	$b_{14\ 23}$
0.3333	0.1776	-0 0351

Calculated value of $b_{12\ 34}$ was 0.333274. Which is taken to be 0.3333. Here we have kept upto four places after decimal point because In multiple correlation problems, the rounding of small decimal fractions often leads to considerable loss in accuracy In subsequent calculations. Hence one should retain as many decimal places as there are variables in the problem. In the given problem we have four variables hence we have taken four places after decimal.

The calculated value of K is

K = -8.860096. ≈ -8.8601

Thus the required regression equation is

$$\bar{\chi}_1 = (0.3333)\ x_2 + (0.1776)\ x_3 - (0.0351)\ x_4 - 8.8601. \ldots\ \ldots\ldots(2)$$

Given a student's attitude towards science learning, study habit and personality, one can estimate using equation number (2), the most probable score in the science achievement test.

The correlation between a set of obtained scores and same score obtained from the multiple regression equation is called coefficient of multiple correlation. It is designated by `R'. Thus the correlation between the science achievement and other three independent variables combined by means of multiple regression equation is

$$R_{1(234)} = \sqrt{1 - \frac{\sigma_{1.234}^2}{\sigma_1^2}}$$

$$= 0.7738$$

$R_{1(234)}$ = 0.7738, means that scores in variables (1) predicted from a multiple regression equation containing variables (2), (3) & (4) correlate 0.77 with scores obtained in variable (1). Thus $R_{1(234)}$ gives the correlation between a criterion (1) and a team of tests 2,3 & 4. 2, 3 & 4 are independent variables and 1 is the criterion to be predicted.

From the table no.3.10, $r_{12.34}$ = 0.50. This means that, if all tribal pupils have the same study habit and personality, the correlation between degree of science learning and attitude towards science learning have positive correlation. Higher is the attitude towards science learning higher is the score in science achievement test. Value of r lies between .4 & .7, hence one can say that there is marked relationship between attitude towards science learning & degree of science learning for tribal pupils of same chronological age and having identical study habit & personality.

$r_{14.23}$ = -0.04, the negative value of the correlation coefficient indicates that keeping the study habit and attitude towards science learning same for tribal pupils, the personality do not affect the degree of science learning.

$r_{13.24}$ = 0.25, means that for tribal pupils belonging to the same chronological age and having same personality and attitude towards science learning, study habit has positive effect an degree of science learning. However as the correlation value is between .2 to .4, are can say that there exist low

correlation between the two factors. Comparing the values of r_{1234} and r_{1423} one may conclude that compared to study habit, attitude towards science learning has a greater effect on the degree of science learning

3.2.8 : Research Question No.8.

Is there any significant difference in the mean science achievement scores of the tribal pupils belonging to high and low SES (Socioeconomic status) ?

We have defined family having monthly income less than Rs.2000/- as low SES and above Rs.2000/- as high SES. Table 3.12 depicts 't' value for high and low SES group children in science achievement test.

Table 3.12 : 't' value for science achievement test

Category	No. of pupils (N)	Mean score (M)	S.D (6)	SE_D	t
Low SES (Tribal)	387	18.53	5.92	0.289	23 521
High SES (Tribal)	99.	25.32	6 80		

The calculated value of 't'is significant at 01 level. Thus pupils belonging to high SES and low SES family differ significantly in their science achievement score. Pupils belonging to high SES do better in science achievement test compared to the pupils belonging to low SES family.

3.2.9 : Research Question No.9 :

Is there any significant difference in the degree of science learning of the tribal pupils belonging to different parental education ?

To seek answer to this question one has to consider the father and the mother education separately. Father or mother having formal education greater than or equal to class-V are considered as having high education and less than class-V are considered as having low education. Table 3 13 depicts the 't' value for science achievement test for pupils having high and low farther education.

Table 3 13 : 't' value for science achivement test

Category	No. of pupils (N)	Mean score (M)	S.D (6)	SE_D	t
Father Edn. High	168	23 40	6.96	0.244	21.755
Father Edn. Low	318	18.09	5.77		

The calculated value of 't' is significant at .01 level. Thus pupils having high father education score significantly high in science achievement compared to the pupils having low father education. Father education has tremendous effect on the degree of science learning of the tribal pupils.

Table 3.14 : depicts the 't' value for science achievement test with different degree of mother education.

Table 3.14 · 't' value for science achivement test

Category	No. of pupils (N)	Mean score (M)	S.D (6)	SE_D	t
Mother Edn. High	66	24.76	7.44	0 357	15.648
Mother Edn. Low	420	19.17	6.25		

Calculated 't value is significant at 01 level Thus pupils of mother having high education do well in science achievement test compared to pupils of mother having less education.

Thus degree of science learning is affected by the parental education Comparing the data of table 3 13 and 3.14 it is clear that compared to men, very less number of women had assess to high education. Mother having high education has a greater influence on science learning compared to the father having high education. Mean score in science achievement test of the pupils having mother education high is 24.76 and having father education high is 23.40. The number of pupils having father and mother having high education are very less in tribal area, hence the combined effect could not be studied. However the 't' value may be calculated in science achievement test for mother having high education and father having high education. Table 3.15 depicts the 't' value for science achievement test with different degree of parent education.

Table 3 15 · 't' value for science achivement test

Category	No of pupils (N)	Mean score (M)	S.D (6)	SE$_D$	t
Father Edn ≥ Class-V	168	23.40	6 96	1.0615	1 2812
Mother Edn ≥ Class-V	66	24.76	7.44		

't' value is not significant There is no difference in science achievement between pupils having father education high or mother education high.

3.2.10 : Research Question No.10 :

Is there any significant difference in the degree of science learning of tribal pupil believing and not believing superstition ?

The number of tribal pupils believing and not believing superstition are 228 & 258 respectively The mean score in science achievement test for the two category are 19.21 and 20.56. To see the difference between the mean is significant or not the 't' value was calculated and depicted in table 3.16.

Table 3.16 : 't' value for science achievement score.

Category	No. of pupils (N)	Mean score (M)	S.D (6)	SE$_D$	t
Believing superstition	228	19.21	6.53	0.234	5.759
Not-belielving superstition	258	20.56	6.79		

The calculated value of 't' is significant at .01 level. Thus there exists significant difference in the science achievement score of the tribal pupils believing and not believering superstition.

1

CHAPTER–IV

MAIN FINDINGS &
DISCUSSION OF RESULTS

4.1 : Introduction :

In the preceding chapters we have presented in detail,

- Structural design of the project,

- Design of tools,

- tools selection and adaptation,

- validation of the tools in tribal belt,

- selection of sample,

- tool administration In a tension free environment,

- data collection and analysis, and

- interpretations.

The major findings may be grouped under different user friendly headings, like

A : Psycho-social profile of the tribal pupils

B : Psycho-social profile of the non-tribal pupils.

C : Comparative study of tribal and non-tribal pupils in the frame work of psycho-social factors.

D · Factors affecting science learning of the tribal pupils.

4.2 : Main Findings and Implementation

4.2.1 : A : Cognitive profile of the tribal pupils :

(1) Tribal pupils belonging to the same chronological age, are at different level of cognitive development (Assuming that our sample of subject is a faithful representation of the universe).

Implication . Text books may have a regimented design, hence the teaching strategies may have to be suitably tuned to the class-room situation.

(2)   Maximum number of tribal pupils are in 2B stage of cognitive development. The percentage of pupils at or above 2B stage is 71 60 and around 28% of pupils are below 2B stage.

Implication ·   text books for class-V may be designed for pupils at 2B stage of cognitive development for effective teaching-learning process. The teacher may take special teaching sessions for the pupils having less than 2B stage of cognitive development level.

(3)   The proportions of tribal boys and girls only at $\dfrac{2B}{3A}$ stage of piagetian level of cognitive development differ significantly (at .05 level). For all other stages of development under consideration the proportion of tribal boys and girls at a particular stage of cognitive development do not differ significantly.

Implication : There is no need to prescribe different text books for tribal boys and girls.

4.2.2 : B : Cognitive profile of the non-tribal pupils :

(1)   Non-tribal pupils having the same chronological age, belong to different level of cognitive development.

Implication · The pupils reading in the same class use the prescribed set of text books, hence to have a effective teaching-learning process the teacher has to adopt different teaching strategies.

(2)   Maximum number of non-tribal pupils are in 3A stage (33.9%) 80 35 percentage of pupils are above 2B stage. Around twenty percent of pupils are below 2B stage. In the state of Orissa the same set of text books are followed for tribal as well as non-tribal pupils. As the non-tribal pupils are at higher level of cognitive development the matching between the cognitive demand of the text book and the cognitive level of the pupils is more compared to the tribal children.

Implication : Text books for class-V may be design for pupils at 2B stage of cognitive development, so that almost 80% of the non-tribal pupils can meet the cognitive demand of the text books.

(3)   The proportion of non-tribal boys and girls only at 2B and 3A stage of cognitive development differ significantly (at .05 level). For all other stages of cognitive development under consideration the proportion of non-tribal boys and girls at a particular stage of cognitive development do not differ significantly.

Implication : There is no need of prescribing different set of text books for girls or boys. However the teacher may adopt different teaching strategies.

4.2.3 : C : Comparative study of tribal vs non-tribal pupils with respect to different psycho-social factors.

(1)   the group cognitive ability (GCA) of the non-tribal pupils is found to be higher than the tribal pupils belonging to the same chronological age.

Implication : Obviously designing a common text book for both the groups is technically unsound. One may perhaps plan to have at least two sets of text books or a set of modules from which a child has to select a limited number of modules as a requirement to complete the learning demands of a particular class.

(2)   Compared to the tribal pupils the non-tribal pupils attain the higher cognitive level at a faster rate.

Implication : Activities have to be designed to promote cognitive accelerations (Adey, 1988) amongst tribal pupils.

(3)   The degree of science learning of the tribal pupils differ from the non-tribal pupils belonging to the same chronological age (at .01 level).

Implication : A science syllabus and text book have to the designed for the tribal pupils taking into account their indigenous science.

(4)   Non-tribal pupils are more creative then the tribal pupils belonging to the same chronological age The composite creativity score of tribal pupils and non-tribal pupils differ significantly (at 01 level).

Implications : Creativity is not completely spontaneous. It can be nurtured (Sharma, 1994; Singh,1985). The individual must make conscious efforts to produce some thing creative. Understanding, discipline, hard work, patience, courageousness are some of the important factors required in an individual to be creative. Motivation is another aspect which is needed to foster creative talent (Amabile, 1998). Perhaps the non-tribal pupils get more conducive environment as far as nurturing creativity is concerned compared to the tribal pupils. Hence emphasis may be given to nurture creative talent of the tribal pupils. To achieve this, the teachers working in the tribal belts of the country may be trained suitably. The teachers may adopt different teaching strategies or methods for fostering creativity in an individual such as :

- brainstorming.
- role-play.
- analogies.
- check list.
- group discussion.
- motivation, etc.

(5)   As far as the H-trait of personality (extrovert or introvert) is concerned the tribal pupils and non-tribal pupils do not differ significantly, belonging to the same chronological age.

Implication . Efforts need not be imposed upon the tribal pupils for enculturisation and for bringing them to the so called urbanized syndrome

(6) The non-tribal pupils have a better study habit compared to the tribal pupils belonging to the same chronological age The score for study habit inventory differ significantly between the tribal pupils & non-tribal pupils (at 01 level)

Implication . The tribal pupils are more engaged in helping the family This may be one of the reason, why the tribal pupils can not maintain certain study habits. After going from the school, the tribal pupils hardly study at home. Due to lack of adequate infrastructure facilities and illiterate parents it may not be possible in the part of these small kids to develop definite study habit Thus to enhance the study habit, the following steps may be taken into consideration.

– orientation of the illiterate parents

– providing adequate infrastructure facilities.

– eradication of poverty.

(7) Attitude towards science learning differ significantly between tribal pupils and non-tribal pupils belonging to the same chronological age. (at .01 level).

Implication . In the tribal areas necessary steps may be taken to popularise science learning. The tribal pupils may develop strong positive attitude towards science learning, once they realise the importance of science. To make them realise about the importance of science the following steps may be taken.

– exposure to multimedia

– organisation of science fair

– science based magic show.

– demonstrations to prove the falsity inbuilt into superstition.

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4.2.4 D : Factors affecting the degree of science learning of the tribal pupils :

(1)   Creativity affects the degree of science learning of the tribal pupils. The correlation coefficient between degree of science learning and creativity is found to be + 0.63

Implication . To enhance the degree of science learning creativity of the tribal pupils may be nurtured.

(2)   Non-cognitive factors like attitude towards science learning, study habit and personality combined together affect the degree of science learning which is being indicated by the value of coefficient of multiple correlation $[R_{1(234)} = 0.7738]$.

Implication : Community sensitisation in the tribal belt is essential.

(3)   Assuming the study habit and attitude towards science learning of all the tribal pupils reading in class-V remaining same, the personality (H-factor) of the tribal pupils do not affect the degree of science learning of the tribal pupils, which is being indicated by a low negative correlation.

Implication · As far as science learning of the tribal pupils are concerned, there is no need to consider the personality factor.

(4)   Assuming the attitude towards science learning and personality of all the tribal pupils belonging to the same chronological age to be same, the study habit has positive effect on the degree of science learning.

Implication : Attempts have to made to help the tribal pupil to develop a regularised study habit at home having correspondence with the family needs & demands.

(5)   Tribal pupils belonging to the same chronological age having high socio-economic status, do better in science achievement test compared to the tribal pupils hailing from low socio-economic status. The difference is significant at .01 level. Thus the socio-economic status affects the degree of science learning of the tribal pupils.

Implication · TRW department may be impressed upon to monitor proper implementation of beneficial schemes in the tribal belt as well as to provide suitable vocations and job opportunities.

(6)   Tribal pupils having father or mother having education $\geq$ class-V do better in science achievement test compared to pupils having father or mother with education < class-V. The difference is significant at .01 level.

Implication : The science learning of the tribal pupils may be enhanced by enhancing the parents education.

(7)   There is no significant difference in the degree of science learning between the pupils having father education greater than equal to class-V or mother education greater than equal to class-V

Implication : Equal importance may be given to the father and mother education.

(8)   The tribal pupils not believing superstition do significantly better in science achievement test compared to tribal pupils believing superstition. The difference is significantly at .01 level.

Implication . To enhance degree of science learning the falsity associated with superstitions may be brought to the notice of the tribal people.

4.3 : Conclusions :

In this sharply focussed time bound research project we have developed/ adopted tools with suitable linguistic modifications to ascertain the psycho-social factors that affect the degree of science learning of the tribal pupils

It has been observed that less than fifteen percent of tribal women have received education up to class five or above class five in the Gajapati district of Orissa. Compared to the tribal men the percentage of tribal women receiving higher education is very less. Two principal reasons that deny girls access to education in the state of Orissa are

- poverty
- traditional believes.

It has been observed that girls generally assume domestic and child care responsibility from a very young age in order to help their family. To enhance girl's education in tribal areas the following aspects may be taken into consideration.

- flexibility in school timings, so that girls can help their family during seasonal agricultural activities.

- the girls may be allowed and encouraged to resume their studies even after extended period of absence.

- more lady teachers may be recruited.

- superstitions and local believes may be eradicated by making them realise the falsity inbuilt into these aspects.

In all cognitive aspects the tribal pupils are found to be inferior than the non-tribal pupils belonging to the same chronological age This is due to the fact that the tribal pupils are found to be at lower cognitive development stage compared to the non-tribal pupils belonging to the same age group It may be due to the disparity related to the following aspects ·

- nutrition

- infrastructure facility

- health problems

- parent's education

- biological reason (heredity)

- pregnancy before complete physical maturity.

The biological reasons responsible for the lower cognitive development of the tribal pupils can not be avoided however all other factors may be taken into consideration to enhance the cognitive development of the tribal pupils

Thus the psycho-social factors like

— cognitive development level

— creativity

— study habit

— attitude towards science learning

— parent's education and

— economic status

may be enhanced to have better degree of science learning amongst the tribals.

ALL ABOUT THE PROJECT

ALL ABOUT THE PROJECT

In response to the invitation for project proposals by, the Educational Research and Innovations Committee (ERIC), of the National Council of Educational Research and Training (NCERT), Dr. J.K. Mohapatra, Reader in Physics, RIE, Bhubaneswar had submitted a proposal on thrust area of education of SC/STs and science education. The experts approved the proposal in the 29th ERIC meeting. The sanction order dated 29-04-1997 was received by the P.I. for conducting the research programme entitled "Effect of Psycho-social factors on Science Learning of Tribal Children of Orissa".

However due to the transfer of the Principal Investigator, as Professor of Science to RIE, Bhopal, the project was transferred to one of the co-investigator of the research team, Dr. (Mrs.) Madhuri Mahapatra. The project finally started in July, 1998 for a period of 22 months.

A review meeting was held at New Delhi from 08-12-1999 to 10-12-1999. It was organised to review the progress of the on-going ERIC sponsored research projects and to approve certain new proposals. Member Secretary ERIC, Dr. (Prof.) Satvir Singh outlined the activities and about the programme. The different discussion sessions were organised. Prof. M.S. Yadev, Prof K.D. Broota and Prof D.N. Sansanwal chaired different sessions. I am personally thankful to Prof. Satvir Singh, Prof. M.S. Yadev, Prof. K.D. Broota and Prof. D.N. Sansanwal for their fruitful discussions and suggestions during the seminar. Prof. D.N. Sansanwal critically analysed all the tools used for data collection. He suggested different statistical techniques to be used for the

analysis of the data In the original project Prof. J K Mohapatra had wished to find the cognitive preference of the tribal pupils. With due permission of the Board of experts the idea was dropped. This was done due to non availability of suitable tool.

Data collection, statistical analysis and report writing were over by July,2001. The project was delayed due to unavoidable reasons involving extensive tour in the tribal belt

REFERENCES

REFERENCES

Adey, P (1988). Cognitive acceleration review and prospects. International Journal of Science Education, Vol 10, No.2, pp.121-134.

Amabile, T.M. (1998). Gender differences in the effects of extrinsic motivation on creativity. Journal of creative behaviours. Vol.32, No.1, Page-18-35.

Ambasht, M.K. and Ritu, K.B. (1995). Effect of household, community and school factors as the enrolement, retention and achievement of scheduled tribes children at primary level. School effectiveness and Learning achievement at primary stage. International perspective, NCERT, New Delhi.

Baird, J.R. & Mitchell, I.M. (1986). Improving the quality of teaching and learning : An Astralian case study - A PEEL project, Monash University, Melbourne, Australia.

Bhargava, S.M. (1989). Survey of educational facilities for weaker sections of the society, namely, sheduled tribes in Orissa. Independent study, NCERT, New Delhi.

Chobey, Madhuri, (1990). A comparatie study of personality factors, academic adjustment and scholastic achievement of socially high and low deprived tribal youths in Rajasthan. Ph.D., Edu. Univ. of Rajasthan.

Ekka, E.M. (1990). Development of tribal education in Orissa after Independence Ph.D., Edu. Utkal University.

Gaur, Ashwini Kumar, (1989). The study of special facilities (incentive) and educational development of tribal students and attitude of society towards them. Independent study.

Gaur, C B (1990) Educational opportunities offered and actually availed by the scheduled tribes in the light of culture patterns of the sub communities of scheduled tribes in Rajasthan *Ph.D., Edu. Barasthali Vidyapitha.*

Lakhera, S K (1986). Educational problems of the scheduled tribes pupils studying in Junior and Secondary Schools of district Chamoli. *Ph.D., Edu Hemwati Nandan Bahuguna Garhwal Univ.*

Malhotra, O.P. (1990). Impact of education on the nicobarese tribal life and adjustment. *D. Litt., Edu. Utkal University.*

Mohapatra, J.K. and Mohapatra, M (1997). Usability of Science Reasoning Tasks under Indian conditions : An assessment, Indian Educational Review, Vol.32, No 1, pp 124-132.

Mohapatra, J.K. and Mohapatra, M (1999). New Dimensions of Science curriculum, an operational approach. Commonwealth publishers, New Delhi.

Ramana, G.V. (1989). Problems of education among the tribal communities of Andhra Pradesh : A case study of Ashram schools. *Ph D., Anthro Sri Venkaeswara Univ.*

Saxena, R.R.; Singh, S. and Gupta, J.K. (1995). School effectiveness and learners achievement at primary stage School effectiveness and learning achievement of primary stage : *International perspective. NCERT, New Delhi.*

Sharma, D. (1994). Developing instructional material for facilitating creativity among elementary school children. Ph.D. Edu. Devi Ahilya Viswa-Vidyalaya.

Sharma, P (1989) <u>A differential study of the scientific aptitudes of the tribal and non-tribal pupils in Chattisgarh</u>. *Ph.D., Edu. Ravishankar Univ*

Singh, G (1985). <u>A study of creative behaviour among adolescent from different cultural backgrounds</u>. Ph.D. Edu. Luckhnow University.

Talesara, Hemlata. (1988) Tribals and education : <u>A quest for integration in the regional mainstream</u>. Independent study. Udaipur, G.S. Teachers college.

Tripathy, P.K. (1991). <u>Cognitive functioning, affective adjustment and academic achievement</u> : A study of the tribal children in Orissa. *Ph.D., Edu. JNU.*

Wilson, A.R.J. and others (1974). <u>Psychological Foundation of Learning and Teaching</u>. New York Mc Graw - Hill Book Co. pp.32.

◆◆◆

ANNEXURES

SCIENCE REASONING TEST

ନାମ _____ ଶ୍ରେଣୀ _____

ବିଦ୍ୟାଳୟ _____ ତାରିଖ _____

ବାଳକ / ବାଳିକା _____ ବୟସ _____

ଆୟତନ ଓ ଗୁରୁତ୍ୱ
VOLUME AND HEAVINESS

୧- ଠିକ୍ ଉତ୍ତରରେ (✓) ଚିହ୍ନ ଦିଅ ।
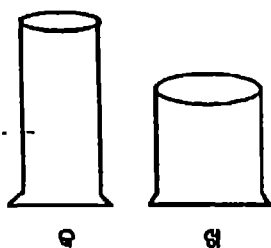
(କ) କ ପାତ୍ରରେ ଖ ପାତ୍ର ଅପେକ୍ଷା ବେଶୀ ଜଳ ଅଛି ।

(ଖ) କ ପାତ୍ରରେ ଖ ପାତ୍ର ଅପେକ୍ଷା କମ୍ ଜଳ ଅଛି ।

(ଗ) କ ପାତ୍ରରେ ଖ ପାତ୍ରରେ ସମାନ ପରିମାଣର ଜଳ ଅଛି ।

୨-

(କ) ଏହି ସମସ୍ତ ସିଲିଣ୍ଡର ରେ ସମାନ ପରିମାଣର ଜଳ ଅଛି କି ?
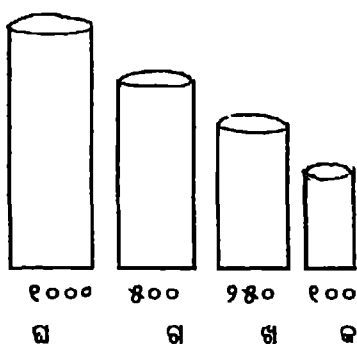
ହଁ ☐

ନାଁ ☐

(ଖ) ଯଦି ନାଁ, ତେବେ କେଉଁଥିରେ ବେଶି ଅଛି ? ....

୧୦୦୦ ୪୦୦ ୨୫୦ ୧୦୦
ଘ   ଗ   ଖ   କ

୩-

(କ) ଉଛାଯାଇଥିବା ମକା ର ପରିମାଣ କଅଁା ମକାର ପରିମାଣ ଠାରୁ

(କ) ଅଧିକ

(ଖ) କମ୍

(ଗ) ସମାନ

(ଖ)   ଭଜା ଯାଇଥିବା ମକା କଣ୍ଢାମକା ଠାରୁ -

  (କ)   ଅଧିକ ଓଜନ ହେବ ।

  (ଖ)   କମ୍ ଓଜନ ହେବ ।

  (ଗ)   ସମାନ ଓଜନ ହେବ ।

କିପରି ଜାଣିଲ ?..
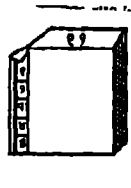
୪.   (କ)   ଏହି ପ୍ରତି ବାକ୍ସ ର ଆୟତନ କେତେ ?

ଉତ୍ତର ....

ସଠିକ୍ ଉତ୍ତର ....

୫.   ଯେତେବେଳେ ପ୍ରତିଟି ସମ୍ପୂର୍ଣ୍ଣରୂପେ ପାଣିରେ ରହିବ, କେତେ ପରିମାଣର ଜଳ ଉଛୁଳି ପଡ଼ିବ ?
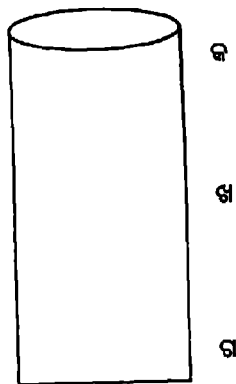
ଉତ୍ତର ....

୬.   (କ)   ଯଦି ପ୍ରତି ଖଣ୍ଡଟିକୁ କ ରୁ ଖ ପର୍ଯ୍ୟନ୍ତ ଦବାଯିବ, ତେବେ -

  (କ)   ବେଶୀ ପରିମାଣର ଜଳ ଉଛୁଳି ପଡ଼ିବ ।
  (ଖ)   କମ୍ ପରିମାଣର ଜଳ ଉଛୁଳି ପଡ଼ିବ ।
  (ଗ)   ସମାନ ପରିମାଣର ଜଳ ଉଛୁଳି ପଡ଼ିବ ।

    (ଖ)   ଯଦି ପ୍ରତିଟିକୁ ର ପର୍ଯ୍ୟନ୍ତ ଦବାଯିବ, ତେବେ -

  (କ)   କମ୍ ପରିମାଣର ଜଳ ଉଛୁଳି ପଡ଼ିବ ।
  (ଖ)   ବେଶୀ ପରିମାଣର ଜଳ ଉଛୁଳି ପଡ଼ିବ ।
  (ଗ)   ସମାନ ପରିମାଣର ଜଳ ଉଛୁଳି ପଡ଼ିବ ।
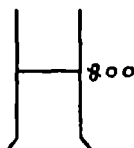
୭.   ୫.   ସିଲିଣ୍ଡର ରେ ନୂଆ ଜଳସ୍ତର କେତେ ହେବ ?

ଉତ୍ତର ....

୮- ଯଦି ପ୍ରତିଟିକୁ ଗୋଟିଏ ବଳୟ ଆକାରର ତିଆରି କରାଯିବ, ତେବେ ଜଳ ସ୍ତର -
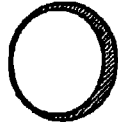
 କ- ସମାନ ରହିବ ।
ଖ- ବେଶି ହେବ ।
ଗ- କମ୍ ହେବ ।

୯- ଯଦି ପ୍ରତିଟିକୁ ଗୋଟିଏ ସିଲିଣ୍ଡର ଆକାରର ତିଆରି କରାଯିବ, ତେବେ ଜଳ ସ୍ତର -

କ- ସମାନ ରହିବ ।
ଖ- ବେଶି ହେବ ।
ଗ- କମ୍ ହେବ ।

୧୦- ଯଦି ଏହି ପିରଣ ବଢ଼ାଟିକୁ ସିଲିଣ୍ଡର ମଧ୍ୟରେ ପ୍ରବେଶ କରାଯିବ, ତେବେ

କ- ବେଶି ପରିମାଣର ଜଳ ଉଚ୍ଛୁଟିପଡ଼ିବ ।
ଖ- କମ୍ ପରିମାଣର ଜଳ ଉଚ୍ଛୁଟି ପଡ଼ିବ ।
ଗ- ସମାନ ପରିମାଣର ଜଳ ଉଚ୍ଛୁଟି ପଡ଼ିବ ।

୧୧- କ. ଏହି ବଡ଼ ପ୍ରତି ଖଣ୍ଡଟି ଜଳରେ ଭାସିବ ଅଥବା ବୁଡ଼ିବ ?

ଉତ୍ତର ....

ଖ. ଏହି ଛୋଟ ପ୍ରତି ଖଣ୍ଡଟି ଜଳରେ ଭାସିବ ଅଥବା ବୁଡ଼ିବ ?

ଉତ୍ତର ....

ଗ. ଏହି ସବୁଠୁ ଛୋଟ ପ୍ରତି ଖଣ୍ଡଟି ଜଳରେ ଭାସିବ ଅଥବା ବୁଡ଼ିବ ?
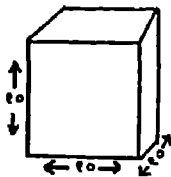
ଉତ୍ତର ....

୧୨- ବାକ୍ସ 'କ'ରେ ୧୫୦୦ ଗ୍ରାମ ଓଜନ ର ତେଲ ଅଛି ।
ବାକ୍ସ'ଖ' ବାକ୍ସ କ ଠାରୁ ଦୁଇଗୁଣ ଲମ୍ବା , ଏବଂ
ଏଥିରେ ଜଳ ଅଛି ।

କ. କ ବାକ୍ସ (ଯେଉଁଥିରେ ତେଲ ଅଛି)
ଜଳରେ ଭାସିବ ଅଥବା ବୁଡ଼ିବ ?

ଉତ୍ତର :.................................
କିପରି ଜାଣିଲ ?.................................

ଖ. ଯଦି'କ'ବାକ୍ସ ରେ ପେଟ୍ରୋଲ ପରିବର୍ତ୍ତେ ୮୫୦ ଗ୍ରାମ ଓଜନ ର ସିରିଟ
ରଖାଯିବ, ତେବେ ଏହା ଜଳରେ ଭାସିବ ଅଥବା ବୁଡ଼ିବ ?
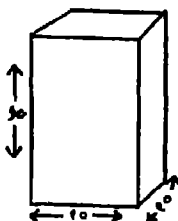
ଉତ୍ତର ....
କିପରି ଜାଣିଲ ?.................................

୧୩- କ. ଆର୍କମେଡିସ୍ ରାଜାଙ୍କର ପୁରୁଣା ମୁକୁଟ ଓ ନୂଆ ମୁକୁଟର ଆୟତନ ମାପ ପାଇଁ ଜଳଭର୍ତ୍ତି ସିଲିଣ୍ଡରରେ ଜଳ ନେଇ କିପରି ତୁଳନା କରିଥିବେ ବୋଲି ଭାବୁଛ ଲେଖ ?

ଉତ୍ତର ....
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ଖ. ତତ୍ପରେ ଆର୍କମେଡିସ୍ ଦୁଇଟି ମୁକୁଟକୁ ଓଜନ କଲେ ଏବଂ ପାଇଲେ ଯେ ନୂଆ ଓ ବଡ଼ ମୁକୁଟଟି ପୁରୁଣା ମୁକୁଟ ଅପେକ୍ଷା ଅଧିକ ଓଜନ । ପରନ୍ତୁ ସେ କହିଲେ ଯେ ନୂଆ ମୁକୁଟଟିରେ କିଛି ହାଲୁକା ଧାତୁ ମିଶାଯାଇଥିଲା ।

ଆର୍କମେଡିସ୍ ଏହା କିପରି ବାହାର କରିଥିବେ ବୋଲି ଭାବୁଛ ଲେଖ ?

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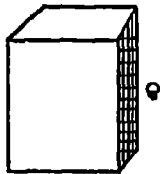
ଏହି ଦୁଇଟି ସିଜର ଖଣ୍ଡ ଦେଖ କ ଖଣ୍ଡଟିର ଓଜନ ୬୦ ଗ୍ରାମ୍ ଓ ଏହାର ଆୟତନ ୧୫ ଘନ ସେ.ମି. । ଖ ଖଣ୍ଡଟିର ଓଜନ ୧୬୦ ଗ୍ରାମ । ତେବେ ଏହାର ଆୟତନ କେତେ ହେବ ।

ଉତ୍ତର : ....ଘନ ସେ.ମି.
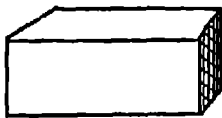
ଏହି ଉତ୍ତର ତୁମେ କିପରି ବାହାର କଲ ?
....,....
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CREATIVITY TEST

ନାମ_____ ବୟସ_____

ଶ୍ରେଣୀ_____ ବାଳକ/ବାଳିକା_____

ବିଦ୍ୟାଳୟ_____

ତାରିଖ _____

ଶିକ୍ଷାଗତ ଯୋଗ୍ୟତା	ପିତା	ମାସିକ ଆୟ	ବୟସ
ବ୍ୟକ୍ତିଙ୍କ ନାମ			
ମାତା			
ଅଭିଭାବକ			

୧- ଏହି ପୁସ୍ତିକାରେ ଥିବା ପ୍ରଶ୍ନାବଳୀ ଗୁଡ଼ିକ ପଢ଼ି ଚିନ୍ତାକରି ଯଥାଶୀଘ୍ର ଉତ୍ତର ଦେବାପାଇଁ ଚେଷ୍ଟାକର ।

୨- ପ୍ରତ୍ୟେକ ପ୍ରଶ୍ନର ଉତ୍ତର ଦିଅ ।

୩- କୌଣସି ପ୍ରଶ୍ନର ଏକ ନିର୍ଦ୍ଦିଷ୍ଟ ଠିକ୍ ବା ଭୁଲ ଉତ୍ତର ନାହିଁ ।

୪- ପ୍ରତ୍ୟେକ ପ୍ରଶ୍ନର ଉତ୍ତର ଲେଖିବା ଆଗରୁ ଉପରେ ଥିବା ନିର୍ଦ୍ଦେଶାବଳୀ କୁ ଭଲଭାବରେ ପଢ ।

୫- ଗୋଟିଏ ପ୍ରଶ୍ନର ଉତ୍ତର ଲେଖିସାରିବା ପରେ ତୁମକୁ ନ କହିବା ପର୍ଯ୍ୟନ୍ତ ଅନ୍ୟ ପ୍ରଶ୍ନର ଉତ୍ତର ଲେଖ ନାହିଁ ।

୬- ଉତ୍ତର ଗୁଡ଼ିକ ସେଗୁଡ଼ିକ ପାଇଁ ଉଦ୍ଦିଷ୍ଟ ସ୍ଥାନରେ ହିଁ ଲେଖ ।

୭- ଉତ୍ତର ଲେଖିବା ବେଳେ ଅନ୍ୟ କାହାରିକୁ ବିରକ୍ତି କରନି କିୟ କୌଣସି ପ୍ରକାର ବିଶୃଙ୍ଖଳା ସୃଷ୍ଟି କର୍ ନାହିଁ ।

୮- ଲେଖା ବନ୍ଦ କରିବାକୁ କହିଲେ ଆଉ ଲେଖନାହିଁ ।

କ: ସମସ୍ୟାମୂଳକ ପ୍ରଶ୍ନାବଳୀ :

୧- ପୃଷ୍ଠା ୩ ରେ ତିନୋଟି ବସ୍ତୁର ନାମ ଲେଖାଯାଇଛି । ଯେତେବେଳେ ଆମେ ସେଗୁଡ଼ିକ ବ୍ୟବହାର କରୁ ସେତେବେଳେ ସେଗୁଡ଼ିକ
     ଆମ ଆଗରେ ବହୁତ ସମସ୍ୟା ସୃଷ୍ଟି କରନ୍ତି । ତୁମେ ସେହି ବସ୍ତୁଗୁଡ଼ିକ ବ୍ୟବହାର କଲେ କେତେ ସମସ୍ୟା ସୃଷ୍ଟି ହୋଇପାରିବ
     ବୋଲି ଭାବୁଛ ଲେଖ ।

୨- ଏହି ତିନୋଟିର ନିର୍ଦ୍ଦିଷ୍ଟ ଉତ୍ତର ଦେବାପାଇଁ କୌଣସି ନିର୍ଦ୍ଦିଷ୍ଟ ସମୟ ସୀମା ନାହିଁ । କିନ୍ତୁ ଏହି ତିନୋଟିର ଉତ୍ତର ଦେବା ପାଇଁ
     ତୁମକୁ ସର୍ବମୋଟ୍ ୬ମିନିଟ୍ ସମୟ ଦିଆଯିବ ଓ ପ୍ରତି ୨ ମିନିଟ୍‌ରେ ତୁମକୁ ସମୟ ବୁଝାଯିବ ।

୩- ଶିକ୍ଷକ ନ କହିବା ପର୍ଯ୍ୟନ୍ତ ଉତ୍ତର ଲେଖିବା ଆରମ୍ଭ କରନାହିଁ ।

୪- ତଳେ ଲେଖାଥିବା ଉଦାହରଣଟିକୁ ପଢ଼ ଓ ଯଦି କିଛି ସନ୍ଦେହ ଥାଏ ଶିକ୍ଷକଙ୍କ ଠାରୁ ବୁଝିନିଅ ।

ଉଦାହରଣ :–

ବସ୍ତୁ : ବୈଦ୍ୟୁତିକ ଇସ୍ତ୍ରୀ (Electric Iron)

କ୍ର:ନ:	ସମସ୍ୟା
୧-	ବିଦ୍ୟୁତ୍ ଦରକାର କରେ
୨-	ପୋଡ଼ି ପକାଏ
୩-	ଲୁଗାପଟା ନଷ୍ଟ କରେ
୪-	ସହଜରେ କଳଙ୍କି ଲାଗେ
୫-	ବ୍ୟୟ ସାପେକ୍ଷ ଅଟେ
୬-	-------------------
୭-	-------------------
୮-	-----------------

୧-   ବସ୍ତୁ :- TV (ଟେଲିଭିଜନ୍)

କ୍ର: ନ:	ସମସ୍ୟା	କ୍ର:ନ:	ସମସ୍ୟା

୨-   ବସ୍ତୁ :- Gun(ବନ୍ଧୁକ)

କ୍ର:ନ:	ସମସ୍ୟା	କ୍ର:ନ:	ସମସ୍ୟା

୩-   ବସ୍ତୁ :-   Thatched House (ଚାଳଘର)

କ୍ର.ନ.	ସମସ୍ୟା	କ୍ର.ନ.	ସମସ୍ୟା

ଖ।   ଅସାଧାରଣ ବ୍ୟବହାର ପ୍ରଣାଳୀ

୧-   ପୃଷ୍ଠା ୫ ରେ କେତୋଟି ବସ୍ତୁର ନାମ ଲେଖାଯାଇଛି ସେଗୁଡ଼ିକ ଆମେ ବିଭିନ୍ନ କାମରେ ବା ବିଭିନ୍ନ ରୂପରେ ବ୍ୟବହାର କରିପାରିବା
      ବସ୍ତୁଗୁଡ଼ିକର ଆକାର, ଆକୃତି ଓ ରଙ୍ଗ ତୁମେ ଯେପରି ଭାବୁଛ ଭାବ ଓ ସେଗୁଡ଼ିକ ଯେତେ ପ୍ରକାର ନାମରେ ବ୍ୟବହାର
      କରାଯାଇପାରିବ ଲେଖ ।

୨-   ସେଗୁଡ଼ିକର ବ୍ୟବହାର ତୁମେ ଏପରି ଲେଖିବା ଦରକାର ଯେଉଁ ଗୁଡ଼ିକ ତୁମର ସାଙ୍ଗମାନେ ଭାବି ନ ଥିବେ ।

୩-   ତୁମକୁ ତିନୋଟିର ଉତ୍ତର ଦେବାପାଇଁ ସର୍ବମୋଟ୍ ୧୨ ମିନିଟ୍ ସମୟ ଦିଆଯିବ, କିନ୍ତୁ ନିର୍ଦ୍ଦିଷ୍ଟ ଉତ୍ତର ପାଇଁ କୌଣସି
      ନିର୍ଦ୍ଦିଷ୍ଟ ସମୟ ସୀମା ନାହିଁ । ପ୍ରତି ୪ମିନିଟ୍‌ରେ ତୁମକୁ ସମୟ ଜଣାଯିବ ।

୪-   ଯେବଳ ଯେତେବେଳେ ଶିକ୍ଷକ କହିବେ, ସେତେବେଳେ ଲେଖା ଆରମ୍ଭ କର ଓ ଲେଖା ବନ୍ଦ କରିବାକୁ କହିଲେ ଲେଖା ବନ୍ଦ କର ।

୫-   ନିମ୍ନରେ ଥିବା ଉଦାହରଣଟିକୁ ପଢ଼ ଓ କିଛି ସନ୍ଦେହ ଥିଲେ ବୁଝିନିଅ ।

ଉଦାହରଣ :

ବସ୍ତୁ - ପେନ୍‌ସିଲ (Pencil)

କ୍ର:ନ:	ବ୍ୟବହାର
୧-	ଭୁଲ ବାଢ଼ି ରୂପେ ବ୍ୟବହାର କରାଯାଏ ।
୨ -	ସେଥିରେ କଣା ବନ୍ଦ କରାଯାଏ ।
୩-	ସେଥିରେ ଜିନିଷକୁ ଠେଲାଯାଏ ।
୪-	ଛୋଟ ବାଢ଼ି ରୂପେ ବ୍ୟବହାର କରାଯାଏ ।
୫-	ସେଥିରେ ଦେହ କୁଣ୍ଡା ଯାଏ ।
୬-	------------------------
୭-	------------------------

୪- ବସ୍ତୁ :- ଲାଉ

କ୍ରୁ:ନ:	ବ୍ୟବହାର	କ୍ରୁ:ନ:	ବ୍ୟବହାର

୫- ବସ୍ତୁ :- ଟୋକେଇ

କ୍ରୁ:ନ:	ବ୍ୟବହାର	କ୍ରୁ:ନ:	ବ୍ୟବହାର

୭- ବସ୍ତୁ :- ବାଉଁଶ

କ୍ରୁ:ନ:	ବ୍ୟବହାର	କ୍ରୁ:ନ:	ବ୍ୟବହାର

୭. ବାକ୍ୟ :- ଯଦି ସବୁ ମଣିଷ ନାଚିବାକୁ ଆରମ୍ଭ କରିବେ _____

କ୍ର. ନ.	କଣ ଘଟିପାରେ	କ୍ର. ନ.	କଣ ଘଟିପାରେ

୮. ବାକ୍ୟ :- ଯଦି ସବୁ ପାହାଡ଼ ସମତଳ ଭୂମି ହୋଇଯିବ। _____

କ୍ର. ନ.	କଣ ଘଟିପାରେ	କ୍ର. ନ.	କଣ ଘଟିପାରେ

୯. ବାକ୍ୟ :- ଯଦି ଆଦୌ ବର୍ଷା ନ ହୁଏ

କ୍ର. ନ.	କଣ ଘଟିପାରେ	କ୍ର. ନ.	କଣ ଘଟିପାରେ

୧.   ମନେକର ତୁମକୁ ଗୋଟିଏ କାର୍ଡିଶିଆ କାଠି ଦିଆଯିବ । ତୁମେ କାଠିଟିରେ ଜୋଲୁଟିକୁ ବାଡ଼େଇଲେ ଯେତେବେଳେ
      ସ୍ୱାଭା ମାଗିବ ତାହା ପାଇବ । ତଳେ ଦୁଇଟି ଖେଳନାର ନାମ ଲେଖାଯାଇଛି । ତୁମେ କାର୍ଡିଶିଆ କାଠିଟିର
      ସାହାଯ୍ୟରେ ସେହି ଖେଳନା ଦୁଇଟିକୁ କେତେ ଆକର୍ଷଣୀୟ ଓ କୌତୁହଳ ପୂର୍ଣ କରିପାରିବ - ଲେଖ ।

୨-   ତୁମର ଲେଖା ଉଦ୍ଦିଷ୍ଟ ସ୍ଥାନ ମଧ୍ୟରେ ସୀମାତ ହେବା ଆବଶ୍ୟକ ।

୩-   ଏହି ଦୁଇଟି ଲେଖାପାଇଁ ତୁମକୁ ୧୦ମିନିଟ୍ ସମୟ ଦିଆଯିବ ଏବଂ ପ୍ରତି ୫ମିନିଟ୍‌ରେ ସମୟ ବୁହାଯିବ ।

୪-   ଶିକ୍ଷକ ଲେଖ୍‌ବାକୁ କହିଲେ ଲେଖା ଆରମ୍ଭ କର ଓ ବନ୍ଦ କରିବାକୁ କହିଲେ ଲେଖା ବନ୍ଦ କର ।

୫-   ତୁମର ଲେଖା ଏପରି ହେବା ଆବଶ୍ୟକ, ଯେପରିକି ତୁମର ସାଥୀମାନେ ସେପରି ଭାବିନଥିବେ ।

୬-   ବୁଝିବାରେ କିଛି ସନ୍ଦେହଥିଲେ ବୁଝିନିଅ ।'

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୧୦. କ୍ର.ନ.   ଶଗଡ଼ରେ ତୁମେ କି ପ୍ରକାର ପରିବର୍ତ୍ତନ ଆଣିପାରିବ ?

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୧୧. କ୍ର.ନ.   ତୁମେ କେଉଁ ପ୍ରକାର ଧନୁଶର ମାଗିବ ?

ଚ.   ସମାନତା ପରୀକ୍ଷା :

୧-   ପୃଷ୍ଠା -୧୦ ରେ ଦୁଇଟି ବସ୍ତୁ ବା ପ୍ରାଣୀ ର ନାମ ଲେଖାଅଛି । ବସ୍ତୁ ଦୁଇଟି ମଧ୍ୟରେ ବହୁତ ସାମଞ୍ଜସ୍ୟ ବା ସମାନତା
      ରହିଛି । ତୁମେ ଯେଉଁ ସାମଞ୍ଜସ ବା ସମାନତା ଅନୁଭବ କରୁଛ - ସେଗୁଡ଼ିକ ଲେଖ ।

୨-   ଦୁଇଟି ମଧ୍ୟରେ ଯେତେ ସବୁ ଅଭୁତ ଓ ଅସାଧାରଣ ସାମଞ୍ଜସ୍ୟ ରହିଛି, ଲେଖିବାକୁ ଚେଷ୍ଟା କର

୩-   ଦୁଇଟି ପ୍ରଶ୍ନପାଇଁ ତୁମକୁ ସର୍ବମୋଟ ୮ ମିନିଟ୍ ସମୟ ଦିଆଯିବ ଓ ପ୍ରତି ୪ ମିନିଟ୍‌ରେ ତୁମକୁ ସମୟ କୁହାଯିବ ।

୪-   ଶିକ୍ଷକ ନ କହିବା ପର୍ଯ୍ୟନ୍ତ ଉତ୍ତର ଲେଖ ନାହିଁ ଓ ଲେଖା ବନ୍ଦ କରିବାକୁ କହିଲେ ଆଉ ଲେଖ ନାହିଁ ।

୫-   ନିମ୍ନରେ ଲେଖାଥିବା ଉଦାହରଣଟିକୁ ପଢ଼ ଓ କିଛି ସନ୍ଦେହ ଥିଲେ ବୁଝନିଅ ।

ଉଦାହରଣ :- ମହୁଫେଣା ଓ କାର୍ଯ୍ୟାଳୟ

କ୍ର.ନ.	ସମାନତା/ସମଞ୍ଜସ
୧.	ଦୁଇଟି ସ୍ବତନ୍ତ ଘର ଅଛି ।
୨.	ଦୁଇଟିରେ କର୍ମଜିବୀ (Workers) ଅଛନ୍ତି ।
୩.	ଦୁଇଟିରେ ଅବସ୍ଥା ବା ୦ବ ଅଛନ୍ତି ।
୪.	ଦୁଇଟିରେ ମୁଖ୍ୟା ଅଛନ୍ତି ।
୫.	ଦୁଇଟିରେ ବିଶୃଙ୍ଖଳା ଦେଖାଯାଏ ନାହିଁ ।
୬.	
୭.	
୮.	

୧୨.   ମାଛ ଓ ବେଙ୍ଗ

କ୍ର.ନ.	ସମାନତା		କ୍ର.ନ.	ସମାନତା

୧୩.   ଫୁଲ ଓ ଗଛ

କ୍ର.ନ.	ସମାନତା		କ୍ର.ନ.	ସମାନତା

ଝ. <u>ଚିତ୍ରାଙ୍କନ ପରୀକ୍ଷା</u>

୧- ପୃଷ୍ଠା -୧୨ ରେ ଦୁଇଟି ସରଳ ଚିତ୍ର ଅଙ୍କନ କରାଯାଇଛି । ସେ ଦୁଇଟିକୁ ବ୍ୟବହାର କରି ଦୁଇଟି ପୂର୍ଣ୍ଣଚିତ୍ର ଅଙ୍କନ କର ଯେପରିକି ଚିତ୍ର ଦୁଇଟି କୌତୁହଳ ପୂର୍ଣ୍ଣ ଓ ଆନନ୍ଦଦାୟକ ହେବ ।

୨- ଚିତ୍ର ଦୁଇଟିର ତଳେ ସେଗୁଡ଼ିକ ର ପ୍ରସଙ୍ଗ ବା ଆଖ୍ୟା ଲେଖ ।

୩- ତୁମେ ଦେଖିଥିବା କୌଣସି ଚିତ୍ର ଅଙ୍କନ କରନାହିଁ ।

୪- ଚିତ୍ର ଦୁଇଟି ସୁନ୍ଦର ବା ରଙ୍ଗୀନ ନ ହୋଇ କୌତୁହଳ ପୂର୍ଣ୍ଣ ଓ ଆନନ୍ଦଦାୟକ ହେବା ଆବଶ୍ୟକ ।

୫- ଚିତ୍ର ଦୁଇଟି ପାଇଁ ସର୍ବମୋଟ ୧୦-ମିନିଟ୍ ସମୟ ଦିଆଯିବ ଓ ପ୍ରତି ପାଞ୍ଚ ମିନିଟ୍ ରେ ତୁମକୁ ସମୟ ଜଣାଯିବ ।

୬- ଶିକ୍ଷକ କେବଳ କହିବେ ଚିତ୍ର ଆଙ୍କିବାକୁ ଆରମ୍ଭ କର ।

୭- ନିମ୍ନରେ ଥିବା ଉଦାହରଣଟିକୁ ଦେଖ ଓ କିଛି ସନ୍ଦେହଥିଲେ ବୁଝିନିଅ ।

ଉଦାହରଣ :
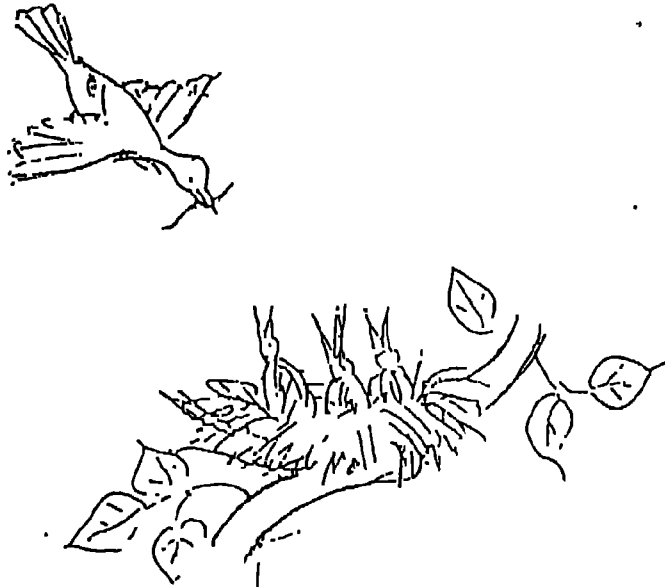
ପ୍ରସଙ୍ଗ : ପ୍ରତ୍ୟେକର ଆବଶ୍ୟକ ମେଣ୍ଟାଇବା ପାଇଁ ବହୁତ କିଛି ଅଛି କି ?

୧୪.
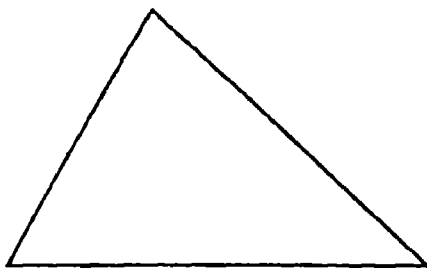
ପ୍ରସଙ୍ଗ :-...

୧୫.

ପ୍ରସଙ୍ଗ ... .

ଜ : ଚିତ୍ର ସମାଧାନ ପରୀକ୍ଷା

୧-   ପୃଷ୍ଠା -୧୪ ରେ କେତେଗୁଡ଼ିଏ ଅସମ୍ପୂର୍ଣ ଚିତ୍ର ଦିଆଯାଇଛି । ତୁମେ ସେଗୁଡ଼ିକୁ ସମ୍ପୂର୍ଣ ଚିତ୍ର ରେ ଅଙ୍କନ କର । ଚିତ୍ରଗୁଡ଼ିକ ଯେତେସମ୍ଭବ କୌତୁହଳମୟ ଓ ଅସାଧାରଣ ହେବା ଆବଶ୍ୟକ । ତୁମର ଚିତ୍ର ଏପରି ହେବା ଦରକାର ଯେପରି ଅନ୍ୟମାନେ ସେପରି ଭାବି ନଥିବେ ।

୨-   ଚିତ୍ରଗୁଡ଼ିକ ଆଙ୍କି ସାରିବା ପରେ ତାର ଏକ ପ୍ରସଙ୍ଗ ବା ଆଖ୍ୟା ଦିଅ ଯେପରିକି ପ୍ରସଙ୍ଗଟି ବେଶ୍ କୌତୁହଳମୟ ହୋଇଥିବ ।

୩-   ଚିତ୍ର ଦୁଇଟି ପାଇଁ ତୁମକୁ ୬-ମିନିଟ ସମୟ ଦିଆଯିବ ଓ ପ୍ରତି ୩-ମିନିଟ ରେ ସମୟ କହି ଦିଆଯିବ ।

୪-   ଶିକ୍ଷକ କହିଲେ ଚିତ୍ର ଅଙ୍କନ କର ଓ ଶିକ୍ଷକ କହିଲେ ଅଙ୍କନ ବନ୍ଦ କର ।

୫-   ତଳେ ଥିବା ଉଦାହରଣଟିକୁ ପଢ଼ ଓ କିଛି ସନ୍ଦେହ ଥିଲେ ବୁଝିନିଅ ।

ଉଦାହରଣ :
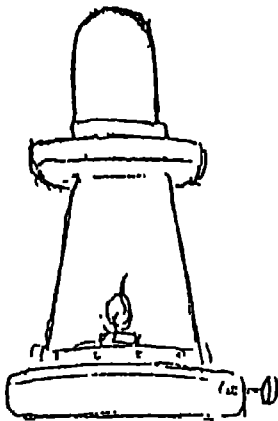
ପ୍ରସଙ୍ଗ : ତୁମେ ହିଁ ପୃଥ୍ବୀର ଆଲୋକ   ପ୍ରସଙ୍ଗ : ଜଣେ ସ୍ତ୍ରୀ ଲୋକ ହାଟକୁ ଯାଇଛି ।

୫୬

ପ୍ରସଙ୍ଗ :..

୫୭-

ପ୍ରସଙ୍ଗ : ....

ଟ .   ବୃଭ ପରୀକ୍ଷା
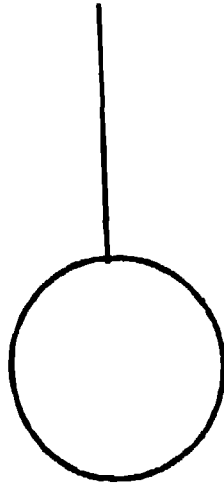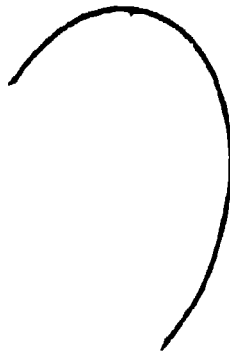
୧-   ନିମ୍ନରେ କେତେଗୁଡ଼ିଏ ବୃଭ ଅଙ୍କନ କରାଯାଇଛି । ବୃଭ ଗୁଡ଼ିକୁ ବ୍ୟବହାର କରି ୫-ମିନିଟ ମଧ୍ୟରେ ଯେତେ ପାରୁଛ ଚିତ୍ର ଅଙ୍କନ କର ଯେପରିକି ପ୍ରତ୍ୟେକ ଚିତ୍ରରେ ଗୋଟିଏ ବୃଭ ନିଶ୍ଚୟ ରହିବ । ତୁମେ ବୃଭଗୁଡ଼ିକର ଭିତର ବା ବାହାର ବା ଉଭୟ ପାର୍ଶ୍ଵରେ ଚିତ୍ର ଆଙ୍କିପାର ।

୨-   ଚିତ୍ର ଗୁଡ଼ିକ ଏପରି ହେବା ଆବଶ୍ୟକ ଯେପରି ତୁମ ଚିତ୍ର ବିଷୟରେ ଅନ୍ୟମାନେ ଭାବି ନଥିବେ ।

୩-   ଯଦି କୌଣସି ଚିତ୍ର ସୁସ୍ପଷ୍ଟ ନ ହୁଏ , ତେବେ ଏହାର ପ୍ରସଙ୍ଗ ବା ଆଖ୍ୟା ତଳେ ଲେଖ ।

୪-   ଶିକ୍ଷକ କହିଲେ ଚିତ୍ର ଅଙ୍କନ କର ଓ ଶିକ୍ଷକ କହିଲେ ଚିତ୍ର ଆଙ୍କିବା ବନ୍ଦ କର ।

୧୮-
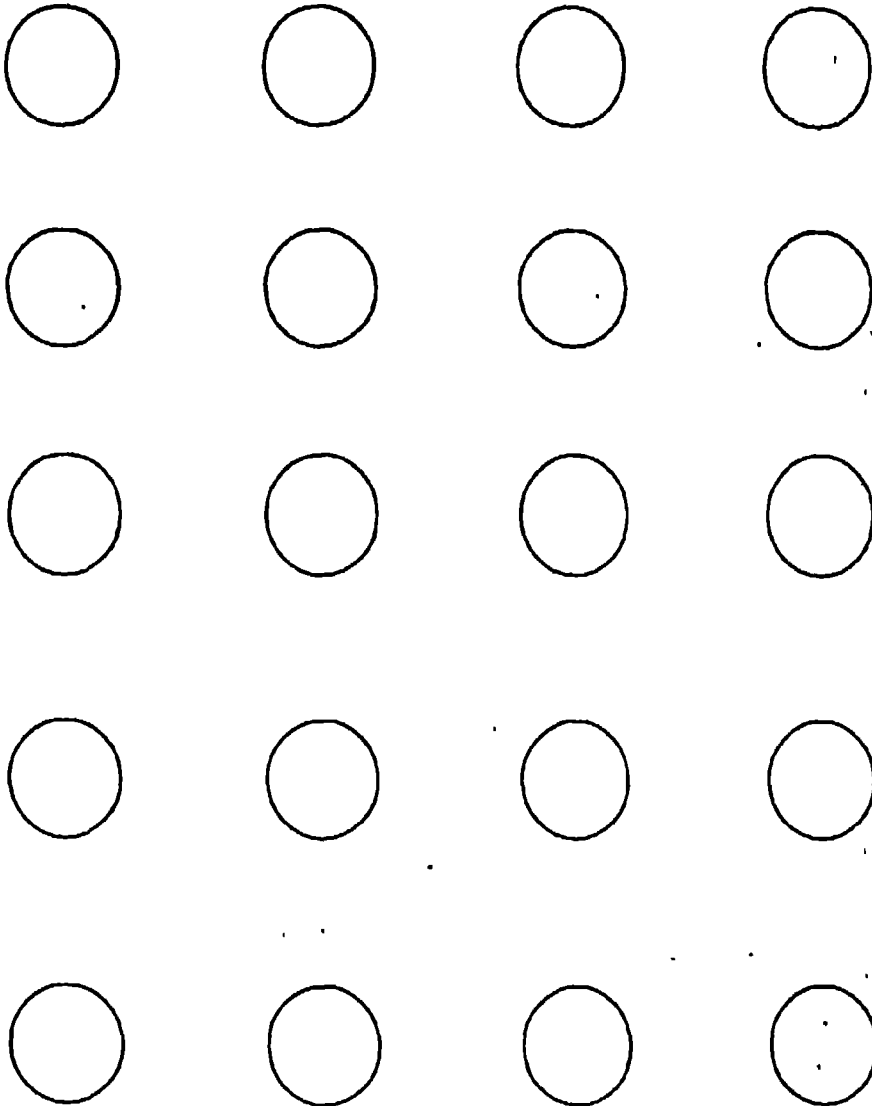
CREATIVE TEST
(SCORING SHEET)

Activity No	Item No.	Fluency	Flexibility	Originality
I	1			
	2			
	3			
II	4			
	5			
	6			
III	7			
	8			
	9			
IV	10			
	11			
V	12			
	13			
Total				

Activity No	Item No	Elaboration	Originality	For Titles Elaboration	For Titles Originality
VI	14				
	15				
VII	16				
	17				
VIII	18				
Total					

SOORE SUMMARY

	Fluency	Flexibility	Elaboration	Originality
Total				

	Verbal	Non-Verbal	Composite	Creativity
Total				

STUDY HABITS INVENTORY

ଶ୍ରେଣୀ ....ମସିହା/ବର୍ଷ.......................

ଅଧନର ବିଷୟ ବସ୍ତୁ.., ...

...., ...

...., ...

ନାମ...

ଅନୁଷ୍ଠାନର ନାମ...

ପର ପୃଷାରେ ଅଧ୍ୟୟନ ସମ୍ବନ୍ଧୀୟ କେତୋଟି ବାକ୍ୟ ଲେଖାଯାଇଛି । ପ୍ରତ୍ୟେକ ବାକ୍ୟ କେତେଗୁଡ଼ିଏ ପଢ଼ାପଢ଼ି ସମ୍ବନ୍ଧୀୟ ଅଭ୍ୟାସକୁ ସୁଚାଉ ଅଛି । ତୁମେ ତୁମର ଅଭ୍ୟାସକୁ ଦର୍ଶାଇବା ପାଇଁ ସେହି ବାକ୍ୟଗୁଡ଼ିକ ର ପରେ ଥିବା ଉପଯୁକ୍ତ ବାକ୍ସ ରେ 'X' ଚିହ୍ନ ଦିଅ ।

ସମସ୍ତ ବାକ୍ୟର ଉତ୍ତର ସଂପୂର୍ଣ୍ଣରୂପେ ଗୋପନ ରଖାଯିବ । ବାକ୍ୟ	ସବୁବେଳେ	ବେଳେବେଳେ	ଆଦୌ ନୁହେଁ
୧- ମୁଁ ଇଂରାଜୀରେ ଲେଖାଥିବା ବହିଗୁଡ଼ିକ ବୁଝିବା ପାଇଁ ବହୁତ ଥର ପଢ଼େ ।	☐	☐	☐
୨- ଗୋଟିଏ ବିଷୟ ଭଲଭାବେ ପଢ଼ିବା ଆଗରୁ ମୁଁ କେଉଁ ବିଷୟରେ ଲେଖାଅଛି ଜାଣିବାକୁ ଚେଷ୍ଟାକରେ ।	☐	☐	☐
୩- ମୁଁ ବହିରୁ ନିଜେ ନୋଟ୍ ତିଆରି କରେ ।	☐	☐	☐
୪- ବହିରେ ପଢ଼ିଥିବା ଗୁରୁତ୍ୱପୂର୍ଣ୍ଣ ଅଂଶଗୁଡ଼ିକ ତଳେ ମୁଁ ଗାର ଦେଇଥାଏ ।	☐	☐	☐
୫- ପଢ଼ୁଥିବା ବେଳେ ଦରକାର ହେଲେ ମୁଁ ଡିକ୍ସନାରୀ ଦେଖେ ।	☐	☐	☐
୬- ଗୋଟିଏ ବିଷୟ ପଢ଼ିଲା ବେଳେ ମୁଁ ସେଥ୍ରେ ଥିବା ବିଷୟ ବସ୍ତୁର ଅନ୍ୟ ବିଷୟ ସହିତ ଥିବା ସଂପର୍କ କୁ ସଂଯୋଗ କରେ ।	☐	☐	☐
୭- ମୁଁ ରହିରହି ପଢ଼େ ।	☐	☐	☐

ବାକ୍ୟ	ସବୁବେଳେ	ବେଳେବେଳେ	ଆଦୌ ନୁହେଁ
୮- ମୁଁ ବୁଝିଲିକି ନାହିଁ ଜାଣିବା ପାଇଁ ନିଜକୁ '' ମୁଁ କ'ଣ ପଢ଼ିଲି '' ବୋଲି ପ୍ରଶ୍ନକରେ ।	☐	☐	☐
୯- ପାଠ୍ୟ ପୁସ୍ତକରେ ଥିବା ପ୍ରଶ୍ନାବଳୀ ସମାଧାନ କରି ମୁଁ ମୋର ପାଠପଢ଼ା ର ପରୀକ୍ଷା କରେ ।	☐☐	☐☐	☐☐
୧୦- ମୁଁ ନ ବୁଝିପାରୁଥିବା ପାଠଗୁଡ଼ିକ ଘୋଷିଦିଏ ।	☐	☐	☐
୧୧- ମୁଁ ଖୁବ୍ ଜୋରରେ ପଢ଼େ ।	☐	☐	☐
୧୨- ପଢୁଥିବାବେଳେ ମୁଁ ବୁଝିପାରୁଥିବା ପାରାଗ୍ରାଫ୍ ଗୁଡ଼ିକୁ ଘୋଷିଦିଏ ।	☐	☐	☐
୧୩- ପଢୁଥିବା ବେଳେ ବହୁତ ଗୁଡ଼ିଏ ବିଷୟରେ ସାମାନ୍ୟ ଜାଣିବା ପରିବର୍ତ୍ତେ ମୁଁ କମ୍ ଘଟଣା/ବିଷୟକୁ ଅଧିକ ଜାଣିବାକୁ ଚେଷ୍ଟା କରେ ।	☐	☐	☐
୧୪- ମୁଁ ପୂରାପୂରି ଏକାଗ୍ରତାର ସହିତ ପଢ଼େ ।	☐☐	☐☐	☐☐
୧୫- ରେଡ଼ିଓ ରେ ଗୀତ ବାଜିବା ବେଳେ ମୁଁ ପଢ଼େ ।			
୧୬- ପଢୁଥିବା ବେଳେ ମୁଁ ଏକ ସଙ୍ଗେ ଅନେକ ଗୁଡ଼ିଏ କଥା ଭାବେ ।	☐	☐	☐
୧୭- ଯେତେବେଳେ ମୋର ପଢ଼ିବାକୁ ଇଚ୍ଛା ହୁଏ ସେତେବେଳେ ମୁଁ ପଢ଼େ ।	☐	☐	☐
୧୮- ଏକାଗ୍ରତା ଆଣିବା ପାଇଁ ମୋତେ କିଛି ସମୟ ଲାଗେ ।	☐☐	☐☐	☐☐
୧୯- ମୁଁ ପଢୁଥିବାବେଳେ ଶୋଇପଡ଼େ ।	☐	☐	☐
୨୦- ପାଖରେ ଘାଣ୍ଟିତୁଣ୍ଡ ହେଲେ ମୁଁ ଅନ୍ୟମନସ୍କ ହୋଇପଡ଼େ ।	☐	☐	☐
୨୧ ପଢୁଥିବା ବେଳେ ମୁଁ ଚିନ୍ତିତ ହୋଇପଡ଼େ ।	☐	☐	☐
୨୨ ଏକ ନିର୍ଦ୍ଦିଷ୍ଟ କାର୍ଯ୍ୟନିର୍ଘଣ୍ଟ ଅନୁଯାୟୀ ମୁଁ ପ୍ରତ୍ୟେକ ଦିନ ବିଭିନ୍ନ ବିଷୟ ପଢ଼େ ।	☐	☐	☐
୨୩ ମୁଁ ରାତିରେ ଶୀଘ୍ର ଶୋଇଯାଏ ଏବଂ ସକାଳେ ଭୋରରୁ ଉଠି ପଢ଼ିବାକୁ ଲାଗେ ।	☐	☐	☐
୨୪ ମୁଁ ଗୋଟିଏ ବିଷୟକୁ କେତେଘଣ୍ଟା ପାଇଁ ଅବିଶ୍ରାନ୍ତ ଭାବରେ ପଢ଼େ ।	☐	☐	☐
୨୫ ଦିନରେ ପଢ଼ିବା ଅପେକ୍ଷା ମୁଁ ରାତିରେ ପଢ଼ିବାକୁ ଭଲପାଏ ।	☐	☐	☐
୨୬ ସାଙ୍ଗମାନଙ୍କ ସହିତ ମିଶି ପଢ଼ିଲେ ମୋର ଉପକାର ହୁଏ ନାହିଁ ।	☐	☐	☐
୨୭ ଗୋଟିଏ ନିର୍ଦ୍ଦିଷ୍ଟ ସମୟ ଭିତରେ ଗୋଟିଏ ନିର୍ଦ୍ଧାରିତ ପାଠ ଶେଷକରିବାକୁ ମୁଁ ନିଜକୁ ବାଧ୍ୟ କରେ ।	☐	☐	☐

ବାକ୍ୟ	ସବୁବେଳେ	ବେଳେବେଳେ	ଆଦୌ ନୁହେଁ
୨୮ ମୋତେ ଦିଆଯାଇଥିବା କାମ ଶେଷ କରିବା ପାର୍ଇଁ ମୁଁ ଅଧିକାଂଶ ସମୟ ଲଗାଏ ।	☐	☐	☐
୨୯ ଶ୍ରେଣୀରେ ଗୋଟିଏ ବିଷୟ ପଢ଼ାହେବା ଆଗରୁ ମୁଁ ତାହା ପଢ଼ିଦେଇଥାଏ ।	☐	☐	☐
୩୦ ଶିକ୍ଷକ ପଢ଼ାଇଥିବା .ପାଠଟିକୁ ଯେତେଶୀଘ୍ର ସମ୍ବ ମୁଁ ଘରିଥରେ ପଢ଼ିଦିଏ ।	☐ ☐	☐ ☐	☐ ☐
୩୧ ମୁଁ ବହୁତ ଗୁଡ଼ିଏ ଚିତ୍ର ଆଙ୍କିବାକୁ ଅଭ୍ୟାସ କରେ ।	☐	☐	☐
୩୨ ଶିକ୍ଷକ ପଢ଼ାଇବାର ତିନିଦିନ କିୟା ଆଉ କିଛିଦିନ ପରେ ମୁଁ ପାଠଟିକୁ ଘରିଥରେ ପଢ଼େ ।	☐	☐	☐
୩୩ କାମର ଚାପ ଯୋଗୁଁ ମୋତେ ଦିଆଯାଇଥିବା ଗୃହକର୍ମ ଗୁଡ଼ିକୁ ମୁଁ ଅନ୍ୟମାନଙ୍କ ଠାରୁ ଟିପିନିଏ ।	☐	☐	☐
୩୪ ମୁଁ ବିଜ୍ଞାନାଗାର କାମ ପାର୍ଇଁ ମଧ୍ୟ ପଢ଼ାପଢ଼ି କରେ ।	☐	☐	☐
୩୫ ପରୀକ୍ଷା ସମୟରେ ମୁଁ ଖାଇବା , ଶୋଇବା , ଓ ବିଶ୍ରାମ ନେବା କୁ ଖାତିର ନ କରି ବହୁତ ପଢ଼େ ।	☐	☐	☐
୩୬ କେବଳ ଗୁରୁଜନ ମାନଙ୍କ ଭୟରେ ମୁଁ କିଛି ଘଣ୍ଟା ପଢ଼େ ।	☐	☐	☐
୩୭ ପଢ଼ୁଥିବା ସମୟରେ ମୁଁ ଚା କିୟା କଫି ପିଏ ।	☐	☐	☐
୩୮ ଥରେ ପଢ଼ିସାରିଲା ପରେ ସନ୍ଦେହ ଥିବା ପାଠ ଗୁଡ଼ିକୁ ମୁଁ ଘରିଥରେ ବୁଝିବାକୁ ଚେଷ୍ଟାକରେ ।	☐	☐	☐
୩୯ ମୁଁ ଥରେ ରୁ ଅଧିକ ଥର ବିଷୟଟିକୁ ପୁନଃଆଲୋଚନା (revision) କରେ ।	☐ ☐	☐ ☐	☐ ☐
୪୦ ପାଠପଢ଼ାର ସମୟଦକ ମୁଁ ଖେଳ-କସରତ ନାଚ ଓ ଫିଲ୍ମଦେଖାରେ ବିତାଇ ଦିଏ ।	☐	☐	☐
୪୧ ବିଛଣାରେ ଶୋଇଥିବା ବେଳେ ମୁଁ ପଢ଼େ ।	☐	☐	☐
୪୨ ପଢ଼ୁଥିବାବେଳେ ମୁଁ ଧୀର ସ୍ୱରରେ ଗୀତର ସୁସ୍ୱରି ଶଦ୍ଧ କରେ ।	☐	☐	☐
୪୩ ପଢ଼ୁଥିବାବେଳେ ଯଦି ମୁଁ ବୁଝିପାରେନି , ତେବେ ଯଥା ଶୀଘ୍ର ସାଙ୍ଗମାନଙ୍କ ପାଖକୁ ଯାଇ ଆଲୋଚନା କରେ ଓ ବୁଝିନିଏ ।	☐	☐	☐
୪୪ ବୁଝିପାରୁନଥିବା ଅଂଶଗୁଡ଼ିକୁ ମୁଁ ଲେଖିରଖେ ଓ ପରେ ସାଙ୍ଗ କିୟା ଶିକ୍ଷକଙ୍କ ସହିତ ଆଲୋଚନା କରେ ।	☐	☐	☐
୪୫ ପାଠପଢ଼ିବାଟା ମୋତେ ବିରକ୍ତିକର ଓ ଅନାଗ୍ରହ ଲାଗେ ।	☐	☐	☐
୪୬ ଭାରତୀୟ ଲେଖକ ମାନଙ୍କର ଲେଖା ପଢ଼ିବାକୁ ମୋତେ ଭଲଲାଗେ ।	☐	☐	☐
୪୭ ବହିଗୁଡ଼ିକର ସାଥିବହି ପଢ଼ିବାକୁ ମୋତେ ଭଲ ଲାଗେ ।	☐	☐	☐

ବାକ୍ୟ	ସବୁବେଳେ	ବେଳେବେଳେ	ଆଦୌ ନୁହେଁ
୪୮ ଶିକ୍ଷକ ଶ୍ରେଣୀରେ ଗାଳିଦିଅନ୍ତି ବୋଲି ମୁଁ ପଢ଼େ ।			
୪୯ ଯେଉଁ ବାକ୍ୟଟି ମୁଁ ପଢ଼ିସାରିଥାଏ କିନ୍ତୁ ନ ପଢ଼ିବା ଭଳି ଲାଗେ , ମୁଁ ପୁଣିଥରେ ସେହି ବାକ୍ୟଟିରେ ଦୃଷ୍ଟିପକାଏ ।			
୫୦ ବିଦ୍ୟାଳୟକୁ ଛାଡ଼ିଦେଲେ ତୁମେ ବାକି କେତେଘଣ୍ଟା ପଢ଼ ?			
୫୧ ନିମ୍ନଲିଖିତ ପ୍ରତ୍ୟେକଟିକୁ ପଢ଼ିବା ପାଇଁ ତୁମେ ତୁମ ସମୟର କେତେ ପ୍ରତିଶତ (%) ଲଗାଅ			
(a) ପାଠ୍ୟକ୍ରମର ପରିଶିଷ୍ଟ ପଢ଼ିବା			
(b) ପାଠ୍ୟ ପତ୍ରିକା			
(c) ନାଟକ ଓ ଏକାଙ୍କିକା			
(d) ଛୋଟ ଗଳ୍ପ			
(e) ସାହିତ୍ୟିକ ସମାଲୋଚନା			
(f) ଇତିହାସ / ରାଜନିତୀ ସମ୍ବନ୍ଧୀୟ / ବିଜ୍ଞାନ / ତର୍କଶାସ୍ତ୍ର ସମ୍ବନ୍ଧୀୟ ବହି ।			
(g) ଖବର କାଗଜ			
(h) ଜନପ୍ରିୟ ପତ୍ରିକା			
(I) ଅନ୍ୟାନ୍ୟ			
୫୨ ମୁଁ ସମ୍ବାଦପତ୍ର ର ଏହି ଅଂଶଗୁଡ଼ିକ ପଢ଼େ			
(a) ପ୍ରଥମ ପୃଷ୍ଠା			
(b) ସଂପାଦକୀୟ			
(c) ଖେଳ ଖବର			
(d) ବିଜ୍ଞାପନ			
(e) ଅର୍ଥନିତୀ ସମ୍ବନ୍ଧୀୟ ଖବର			
(f) ଶିଶୁ ସମ୍ବନ୍ଧୀୟ			
(g) ସିନେମା ଖବର			
(h) ଶ୍ରଦ୍ଧାଞ୍ଜଳୀ			
(I) ରାଶିଫଳ			
(j) ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ ଲେଖା			
k) ଅନ୍ୟାନ			

ତୁମେ କ'ଣ କର ଓ କ'ଣ ଚିନ୍ତା କର

ନାମ... ବୟସ.............

ଶ୍ରେଣୀ.. ବାଳକ/ବାଳିକା...........................

ବିଦ୍ୟାଳୟ ....

ତଳେ ଲେଖଥିବା ପ୍ରତ୍ୟେକ ବାକ୍ୟକୁ ପଢ, ଏବଂ ତୁମେ ଯାହା ଅନୁଭବ କରୁଛ,ବା ତୁମକୁ ଯେଉଁଟି ଠିକ୍ ଲାଗୁଛି, ତା ପାଖରେ ଥିବା ବାକ୍ସରେ 'X' ଚିହ୍ନ ଦିଅ । ଯଦି ତୁମକୁ କିଛି ଶବ୍ଦ କଠିନ ଲାଗିବ ତେବେ ପାଟିତୁଣ୍ଡ ନ କରି ହାତ ଟେକିବ । କେତେକ ପ୍ରଶ୍ନ ପାଖରେ ଦୁଇଟି ଓ ଅନ୍ୟ କେତୋଟି ପାଖରେ ତିନୋଟି ବାକ୍ସ ଦିଅଯାଇଛି । ପ୍ରତ୍ୟେକ ବାକ୍ସ ପାଖରେ ଥିବା ଲେଖାକୁ ପଢ ଓ ଯେଉଁଟିକୁ ତୁମେ ଠିକ୍ ଉତ୍ତର ବୋଲି ଭାବୁଛ, ତା' ପାଖରେ ଥିବା, ବାକ୍ସରେ 'X' ଚିହ୍ନ ଦିଅ ।

ସମସ୍ତ ବାକ୍ୟର ଉତ୍ତର ଦିଅ ।

୧. ତୁମେ ଯେତେବେଳେ ଗୋଟିଏ ନୂଆ କୋଠା ବା ଘର ଦେଖିବାକୁ ଯାଅ ତୁମେ ତାହା ଅନ୍ୟଜଣଙ୍କ ଦ୍ୱାରା ଦେଖିବାକୁ ଚାହଁ ☐ କିୟା ☐ ନିଜେ ଖୋଜି ବାହାର କରିବାକୁ ଚେଷ୍ଟା କର ।

୨. ଜଣେ ପିଲା ତୁମକୁ ଦେଖି ହସିଲେ ତୁମେ ଖରାପ ଅନୁଭବ କର ☐ କିୟା ☐ ତୁମେ ମଧ ହସିଦିଅ ।

୩. ସବୁକିଛି ଭଲଭାବେ କରିପାରିବ ବୋଲି ତୁମେ ଭାବକି ? ☐ ଅଥବା ☐ ଅଳ୍ପ କିଛିକରି ପାରିବ ବୋଲି ଭାବ ।

୪. ଖେଳ ପଡିଆରେ ଖେଳୁଥିବା ସମୟରେ ତୁମେ ଛିଡାହୁଅ ☐ କିୟା ☐ ବହୁତ ଦଉଡ

୫. ତୁମର ମାଆ ତୁମକୁ ଖୁବ୍ ଚଞ୍ଚଳମନା ଏବଂ ଅସ୍ଥିର ଚିର ବୋଲି ଭାବନ୍ତି । ☐ କିୟା ☐ ଧୀର ସ୍ଥିର ବୋଲି ଭାବନ୍ତି ।

୬. ତୁମେ ବିଦ୍ୟାଳୟରେ ଛାନିଆ ହୋଇଯାଅ । ☐ କିୟା ☐ ହସ ଖୁସିରେ ରୁହ

୭. ତୁମେ ଧୀର ଓ ମନ୍ଥର ଗତିରେ କାମସବୁ କର । ☐ କିୟା ☐ ଖୁବ୍ ଚଞ୍ଚଳ କର ।

୮. ତୁମ ଦଳ ବା ଗ୍ରୁପ୍‍ରେ ଅନ୍ୟ କେହି ମୁଖ୍ୟ଼ା ଅଛନ୍ତି ☐ କିୟା ☐ ତୁମେ ନିଜେ ମୁଖିଆ

୯   ତୁମର ଅନେକ ସାଙ୍ଗ ଅଛନ୍ତି କି ?   ☐ କିୟା ☐ ଅଳ୍ପ ଭଲ ସାଙ୍ଗ ଅଛନ୍ତି ।

୧୦.   ତୁମେ ବହୁତ ହସ   ☐ କିୟା ☐ ଅଳ୍ପ ହସ

୧୧.   ''ସାଧାରଣତଃ'' ର ଅର୍ଥ ହେଉଛି -   ☐ କିୟା ☐ କେବେକେବେ
     ପ୍ରାୟତଃ   ☐ କିୟା ☐ ସଦାବେଳେ

୧୨.   ତୁମେ ତୁମର ବାପାମାଆଙ୍କୁ କେବେକେବେ
     ରାଗିକରି ଜିଭ କୁହ କି ?   ☐ କିୟା ☐ ଏପରି କରିବା ଭୁଲ ଅଟେ ।

୧୩.   ତୁମେ ଧୁରସ୍ଥିର ଭାବେ ବସ ବୋଲିଶିକ୍ଷକ
     ଭାବନ୍ତି କି ?   ☐ କିୟା ☐ ଏଣେତେଣେ ବେଶୀ ଦୌଡା
          ଦୌଡି କର ବୋଲି ଭାବନ୍ତି

୧୪.   ସାଙ୍ଗ ମାନଙ୍କ ଯୁକ୍ତିତର୍କରେ ତୁମେ ଭାଗ ନିଅ
     କି ?   ☐ ଅଥବା ☐ ଯୁକ୍ତିତର୍କ ଶେଷ ପର୍ଯ୍ୟନ୍ତ ଅପେକ୍ଷା
          କର ।

୧୫.   ଯେପରି 'ପାଦ'ର ସଂପର୍କ 'ଗୋଡ' ସହିତ
     ସେପରି 'ପାପୁଲି'ର ସଂପର୍କ :- ହାତର ମଣିବନ୍ଧ   ☐ କିୟା ☐ ଆଙ୍ଗୁଳି ସହିତ
          ☐ କିୟା ☐ ବାହୁ ସହିତ

୧୬.   ମଢୁଆ ଲୋକକୁ ଦେଖିଲେ ତୁମକୁ ଅଡୁଆ
     ଲାଗେ   ☐ କିୟା ☐ ଅଡୁଆ ଲାଗେନି ।

୧୭.   ଚଢେଇଟି ଦେଖିଲେ ତୁମେ ତାକୁ ଶିକାର
     କରିବାକୁ ଚାହିଁବ ।   ☐ କିୟା ☐ କୁ ଦେଖି ତାର ଚିତ୍ର ଆଙ୍କିବ ।

୧୮.   ତୁମ ନିଜର ଖେଳଣା ତୁମେ ନିଜେ କିଣିବାକୁ
     ଯାଅ ।   ☐ କିୟା ☐ ମାଆ କିଣି ଦିଅନ୍ତି ।   ୴

୧୯.   ୭, ୫, ୩ ଗୋଟିଏ କ୍ରମରେ
     ରହିଲେ, ଗଟି ପରବର୍ତୀ ସଂଖ୍ୟା କେତେ ହେବ ?
     ଭଉର :-   ୯ ☐ କିୟା ☐ ୧ କିୟା ☐ ୦

୨୦.   ତୁମ ପରିବାରରେ ତୁମେ ଜଣେ ସୁଖୀପିଲା   ☐ କିୟା ☐ ଜଣେ ଦୁଃଖୀ ପିଲା ଅଟ ।

୨୧.   ତୁମେ ଶିକ୍ଷକଙ୍କ ସହିତ କଥା ହେବାକୁ ଭଲ ପାଇବ   ☐ କିୟା ☐ ଜଣେ ଭଲ ସାଙ୍ଗ ସହିତ କଥା
          ହେବାକୁ ଭଲ ପାଇବ ।

୨୨. ଯଦି ଦୁଇଜଣ ଶିଶୁ ଖୋଳ ଘଉଥିଆରେ ମାରପିଟ ଲାଗିଥିବେ, ତୁମେ ସେମାନଙ୍କୁ ମାରପିଟ୍ କରିବାକୁ ଦେବ   ☐ କିୟା ☐ ଯାଇ ଶିକ୍ଷକଙ୍କୁ କହିବ ।

୨୩. ଏହି ତାଲିକାରେ କେଉଁଟି ଅନ୍ୟମାନଙ୍କଠୁ ଅଲଗା ? (ଥଣ୍ଡା, ଗରମ, ଓଦା, ଉଷ୍ମ)   ☐ କିୟା ☐ ଥଣ୍ଡା କିୟା ☐ ଓଦା

୨୪. ବସ୍ତିଭିତରେ ଯଦି କେହି ତୁମକୁ ଠେଲାପେଲା କରିବେ, ତୁମେ ଟିକିଏ ହସିଦେବ ।   ☐ କିୟା ☐ ରାଗିଉଠିବ ।

୨୫. ତୁମେ ଏଠାରେ ଭାଲୁଟିଏ ନିଜ ଆଖିରେ ଦେଖିବାକୁ ଭଲପାଇବ ।   ☐ କିୟା ☐ ଭାଲୁ ବିଷୟରେ ଗପ ଶୁଣିବାକୁ ଭଲ ପାଇବ

୨୬. ତୁମେ ପାଠାଗାରରେ ବହି ପଢ଼ିବାକୁ ଭଲ ପାଇବ   ☐ କିୟା ☐ ସୈନିକ ମାନଙ୍କର ମୁଖ୍ୟ ହେବାକୁ ଭଲ ପାଇବ ।

୨୭. ଯଦି ମେରୀର ମାମୁଁ ମୋର ବାପା ହୁଅନ୍ତି, ତେବେ ମେରୀର ଭଉଣୀ ମୋର କ'ଣ ହେବେ ?   ଭଉଣୀ ☐ କିୟା ☐ ଝିଆରି   କିୟା ☐ ମାଉଁ

୨୮. ତୁମେ ଉତ୍ତେଜିତ ହେଲେ ଲୋକମାନଙ୍କୁ ଗାଳିଦିଅ ବୋଲି ସେମାନେ କହନ୍ତି   ☐ କିୟା ☐ ତୁମକୁ ଧୈର୍ଯ୍ୟବାନ୍ ବୋଲି ଭାବନ୍ତି ।

୨୯. ମାଆଙ୍କର କାର୍ଯ୍ୟ କରିବାର ଧାରା ସବୁବେଳେ ଭଲ   ☐ କିୟା ☐ ତୁମ ନିଜର ନୂଆ ଉପାୟ ବେଳେବେଳେ ଭଲ ।

୩୦. ତୁମେ ନାଚ କରିବାକୁ ଭଲ ପାଇବ   ☐ କିୟା ☐ ସୈନିକ ହେବାକୁ ଭଲ ପାଇବ ।

୩୧. ତୁମେ ସିନେମା ଦେଖିବାକୁ ଭଲପାଇବ   ☐ ଅଥବା ☐ ଗୀର୍ଜା/ମନ୍ଦିର କୁ ଯିବାକୁ?

୩୨. ତୁମେ ଯେପରି କାମ କର ସେପରି କରିବ   ☐ କିୟା ☐ ଆହୁରି ଭଲ କରିପାରିବ ।

୩୩. କେଉଁ ପ୍ରକାର ଗଳ୍ପ ଶୁଣିବାକୁ ତୁମେ ଭଲପାଇବ :- ରାକ୍ଷସ ମାନଙ୍କୁ ମାରିବା ର ଗୋଟିଏ ଗଳ୍ପ ।   ☐ କିୟା ☐ ରାକ୍ଷସ ମାନଙ୍କର କୁହୁକ ବିଦ୍ୟାର କରାମତି ବିଷୟରେ ଗୋଟିଏ ଗଳ୍ପ ।

୩୪. ଜୋର୍‌ରେ ପାଟିତୁଣ୍ଡ ବା ଗଣ୍ଡଗୋଳ
ହେଲେ ତୁମେ ଭୟ ପାଇଯାଅ । ☐ କିୟ ☐ ଟିକିଏ ହସିଦିଅ ।

୩୫. ତୁମେ ସବୁବେଳେ ନିୟମ ମାନି ଚଳ ☐ କିୟ ☐ କେବଳ ଯେତେବେଳେ ଜଣେ
କେହି ଦେଖୁଥାନ୍ତି ।

୩୬. ତୁମର ଭାବନା ସହଜରେ ଆଘାତ ପାଏ ☐ କିୟ ☐ ସହଜରେ ନୁହେଁ ।

୩୭. ତୁମେ ଡାକଟିକଟ ସଂଗ୍ରହ କରିବାକୁ
ଭଲ ପାଇବ । ☐ କିୟ ☐ ଫୁଟବଲ୍‌ ଖେଳିବାକୁ ଭଲପାଇବ ।

୩୮. ତୁମ ଇଚ୍ଛା ବିରୁଦ୍ଧରେ କାମଟିଏ
କରିବାକୁ କହିଲେ ତୁମେ
ରାଗିଯିବ । ☐ କିୟ ☐ କାମଟି କରିବ ।

୩୯. କାମଟିଏ ଆରମ୍ଭ କଲାପରେ ଯଦି
କଷ୍ଟ ଲାଗିବ, ତେବେ ତୁମେ କାମଟି
ଛାଡ଼ିଦେବ । ☐ କିୟ ☐ କରିବ ।

୪୦. ନୂଆଶିକ୍ଷକଙ୍କୁ ତୁମକୁ ଭୟ ଲାଗେ କି ? ☐ କିୟ ☐ ତୁମେ ସେମାନଙ୍କୁ ଭଲପାଅ ।

୪୧. ତୁମେ ସାଇକେଲ୍‌ ଚଲେଇବାକୁ ଭଲପାଇବ ☐ କିୟ ☐ ଗୀତ ଶୁଣିବାକୁ ଭଲପାଇବ ।

୪୨. ଶିକ୍ଷକ ତୁମକୁ ଟାଳି ଦିଅନ୍ତି । ☐ କିୟ ☐ ତୁମେ ଠିକ୍‌ ବୋଲି ଭାବନ୍ତି ।

୪୩. ମାଆ ଡାକିଲେ ତୁମେ ଟିକିଏ ପରେ ଆସ ☐ କିୟ ☐ ସଙ୍ଗେ ସଙ୍ଗେ ଆସ ।

୪୪. ଅଧିକାଂଶ ପିଲା ତୁମ ପ୍ରତି ଦୟାଳୁ ଅଟନ୍ତି ☐ କିୟ ☐ ବେଳେବେଳେ ନିଷ୍ଠୁର ହୁଅନ୍ତି ।

୪୫. ତୁମେ ବହି ପଢ଼ିବାକୁ ଭଲ ପାଇବ ☐ କିୟ ☐ ବଲ୍‌ ଖେଳିବାକୁ ଭଲ ପାଇବ ।

୪୬. କେହିଜଣେ ଗୋଟିଏ ନୂଆ ବିଷୟରେ
ଧାରଣା ଦେଲେ ତୁମେ ତାହା ଠିକ୍‌ କହିବ । ☐ କିୟ ☐ ନିଶ୍ଚିତ ହେଲା ପର୍ଯ୍ୟନ୍ତ ଅପେକ୍ଷା
କରିବ ।

୪୭. ଗୋଟିଏ ପ୍ରଶ୍ନର ଉତ୍ତର ଜାଣିଥିଲେ
ତୁମେ ହାତଟେକିବ । ☐ କିୟ ☐ ପଚରା ଯିବା ପର୍ଯ୍ୟନ୍ତ ଅପେକ୍ଷା କର ।

୪୮. ତୁମେ ଯାହା କୁହ ତୁମର ବାପା ମାଆ
ସବୁବେଳେ ତାହା ଶୁଣିବା ପାଇଁ ପ୍ରସ୍ତୁତ ଥା’ନ୍ତି । ☐ କିୟ ☐ ସେମାନେ ବେଳେବେଳେ ବହୁତ
ବ୍ୟସ୍ତ ଥାଆନ୍ତି ।

୪୯. ଗୋଟିଏ ନାଟକରେ ତୁମେ ମୁଖ୍ୟନାୟକ
ହେବାକୁ ଚାହିଁବ ।

☐ କିୟା ☐ ଜଣେ ପ୍ରସିଦ୍ଧ ଲେଖକ ହେବାକୁ
ଚାହିଁବ ।

୫୦. ଯଦି ତୁମକୁ ଠକି ଦିଆଯିବ, ତୁମେ
ହସିଦେବ ।

☐ ଅଥବା ☐ ସାମାନ୍ୟ ରାଗିଯିବ ।

୫୧. ତୁମେ ନିଜେ ମାଛ ଧରି
ଯିବାକୁ ଭଲ ପାଇବ

☐ ଅଥବା ☐ ପିଲାମାନଙ୍କ ସହିତ ଖେଳିବାକୁ
ଭଲପାଇବା

୫୨. ତୁମେ ଯେତେବେଳେ, ନିଜକୁ ଠିକ୍ ବୋଲି
କହି ବାଜିମାର , ଶେଷରେ ଅଧିକାଂଶ
ସମୟରେ ତୁମେ ଜିତିଯାଅ ।

☐ କିୟା ☐ ଅଧିକାଂଶ ସମୟରେ ହାରିଯାଅ ।

୫୩. ବିଦ୍ୟାଳୟ ଜୀବନ କଷ୍ଟ ଅଟେ ,

☐ ଅଥବା ☐ ସହଜ ଅଟେ ।

୫୪. ତୁମ ସ୍କୁଲ କାମ   ତୁମେ ବେଳେ,ବେଳେ
ଭୁଲିଯାଅ ,

☐ କିୟା ☐ ସେ ସୁଦ୍ଧିକ ତୁମେ ମନେ ପକାଇ
ପାରିବ ବେଲି ଭାବ ।

୫୫. ଯଦି ତୁମେ ଗୋଟିଏ ବନ୍ୟପ୍ରାଣୀ ହୋଇଥାଆନ୍ତ,
ତୁମେ ସିଂହ ହୋଇଥାଆନ୍ତ ,

☐ କିୟା ☐ ଗୋଟିଏ ଜୋର୍ରେ ଦୌଡୁଥିବା
ଘୋଡ଼ା ହୋଇଥାଆନ୍ତ

୫୬. ତୁମେ ଅଧିକାଂଶ କାମ
ଭଲରେ କରିପାର ,

☐ କିୟା ☐ ଅନ୍ୟମାନେ ଭଲରେ କରିପାରନ୍ତି ।

୫୭. ତୁମେ ସ୍କୁଲକୁ ଯିବ

☐ କିୟା ☐ ଘରେ କାମ କରିବ ।

୫୮. ଜୀବଜନ୍ତୁ ତୁମକୁ ଆକ୍ରମଣ କରୁଥିବାର
ସ୍ୱପ୍ନ ତୁମେ ଦେଖ ,

☐ କିୟା ☐ ଭଲ ସ୍ୱପ୍ନ ଦେଖ ।

୫୯. ବଡ଼ ମଣିଷ ମାନେ ତୁମ କଥା ଶୁଣିବାକୁ
ସବୁବେଳେ ଖୁସି ହୁଅନ୍ତି

☐ କିୟା ☐ ତୁମେ କଥାବାର୍ତ୍ତା କଲାବେଳେ
ସେମାନେ ରାଗିଯାଆନ୍ତି ।

୬୦. ତୁମେ ଶ୍ରେଣୀରେ ସହଜରେ ଠିଆ ହୋଇ
କଥା କହିପାର

☐ କିୟା ☐ ଲାଜ ଅନୁଭବ କର ।

୬୧ : ତୁମେ କୌତୁକିଆ ବହି ପଢ଼ିବାକୁ
ଭଲପାଇବ

□ କିୟା □ ଅଂକ କଷିବାକୁ ଭଲ ପାଇବ ।

୬୨. ଛୋଟ ଛୋଟ କଥାରେ ତୁମେ ରାଶିଯାଲ
ଜିନିଷ ପତ୍ର ଫୋପାଡ଼ି ଦିଅ ।

□ କିୟା □ ଶାନ୍ତ ରୁହ ।

୬୩. ତୁମେ ଲମ୍ବା ଗଳ୍ପ ଶୁଣିବାକୁ ଭଲପାଅ

□ କିୟା □ ବିରକ୍ତ ଅନୁଭବ କର ।

୬୪. ତୁମେ ସ୍ଥିର କରିଥିବା କାମଗୁଡ଼ିକ
ସହଜରେ ହୁଏ ନାହିଁ

□ କିୟା □ ସହଜରେ ହୋଇଯାଏ ।

୬୫. ଘରେ ତୁମେ ପ୍ରଥମେ ବାସନ ମଜାରେ
ସାହାଯ୍ୟ କରିବ ।

□ କିୟା □ ଟି.ଭି. ଦେଖ୍‌ବ ଓ ଗୀତ ଶୁଣିବ ।

୬୬. ତରବରିଆ ଥିବା ସମୟରେ ତୁମେ
ତୁମର ଲୁଗାପଟା ଠିକ୍‌ ଜାଗାରେ ରଖ

□ କିୟା □ ଫୋପାଡ଼ି ଦିଅ ।

୬୭. ବିଦ୍ୟାଳୟଟି ତୁମକୁ ଗୋଟିଏ ବୋଝ
ଭଳି ଲାଗେ ।

□ କିୟା □ ଠିକ୍‌ ଲାଗେ ।

୬୮. ତୁମେ ବହୁତ ଗୁଡ଼ିଏ ଭୁଲ କର ବୋଲି
ଲୋକମାନେ ଭାବନ୍ତି ।

□ କିୟା □ କମ୍‌ ଭୁଲ୍‌ କର ବୋଲି ଭାବନ୍ତି ।

୬୯. ପଢ଼ିଲାବେଳେ ପାଠରେ ମନ ଲଗାଇବା
ତୁମ ପକ୍ଷେ କଷ୍ଟ ହୋଇପଡ଼େ

□ କିୟା □ ତୁମେ ମନ ଲଗାଇ ପଢ଼ିପାର ।

୭୦. ସକାଳେ ମାଆ ଡାକିଲେ ତୁମେ
ବିଛଣାରୁ ଶୀଘ୍ର ଉଠିପଡ଼

□ କିୟା □ ଉଠିବାକୁ କଷ୍ଟ ଲାଗେ ।

ତୁମେ କ'ଣ ଭଲ ଓ କ'ଣ ଠିକ୍ କର

ନାମ... ବୟସ.............

ଶ୍ରେଣୀ................................ ବାଳକ/ବାଳିକା...........................

ବିଦ୍ୟାଳୟ ....

ତଳେ ଲେଖାଥିବା ପ୍ରତ୍ୟେକ ବାକ୍ୟକୁ ପଢ, ଏବଂ ତୁମେ ଯାହା ଅନୁଭବ କରୁଛ, ବା ତୁମକୁ ଯେଉଁଟି ଠିକ୍ ଲାଗୁଛି, ତା ପାଖରେ ଥିବା ବାକ୍ସରେ 'x' ଚିହ୍ନ ଦିଅ । ଯଦି ତୁମକୁ କିଛି ଶବ୍ଦ କଠିନ ଲାଗିବ ତେବେ ପାଟିତୁଣ୍ଡ ନ କରି ହାତ ଟେକିବ । କେତେକ ପ୍ରଶ୍ନ ପାଖରେ ଦୁଇଟି ଓ ଅନ୍ୟ କେତୋଟି ପାଖରେ ତିନୋଟି ବାକ୍ସ ଦିଆଯାଇଛି । ପ୍ରତ୍ୟେକ ବାକ୍ସ ପାଖରେ ଥିବା ଲେଖାକୁ ପଢ ଓ ଯେଉଁଟିକୁ ତୁମେ ଠିକ୍ ଉତ୍ତର ବୋଲି ଭାବୁଛ, ତା' ପାଖରେ ଥିବା, ବାକ୍ସରେ 'x' ଚିହ୍ନ ଦିଅ ।

ସମସ୍ତ ବାକ୍ୟର ଉତ୍ତର ଦିଅ ।

୧.	ତୁମେ ତୁମର ସ୍କୁଲକାମ ଶୀଘ୍ର ସାର	☐ କିୟା ☐	ଏହା ଅଧିକ ସମୟ ନିଏ
୨.	ଖେଳୁଥିବା ସମୟରେ ହାରିଗଲେ ତୁମେ ଖେଳ ବନ୍ଦ କରିଦିଅ	☐ କିୟା ☐	ଅଧିକ ଉତ୍ସାହର ସହିତ ଖେଳିଚାଲ
୩.	ତୁମେ ଯାହା ସ୍ଥିର କରିଥାଅ ସେ ବିଷୟରେ ସାଙ୍ଗମାନଙ୍କୁ ସହଜରେ ମତେଇ ପାର	☐ କିୟା ☐	ସହଜରେ ମତେଇ ପାରନି
୪.	ଅନେକ .....ା ତୁମଠାରୁ ଭଲରେ ଭଲରେ କାମ ସବୁ କରୁଥିବେ	☐ କିୟା ☐	ତୁମେ ଅନ୍ୟମାନଙ୍କଠୁ ଭଲରେ କରିପାର
୫.	ତୁମେ ଚାହୁଁଥିବା କାମଟିକୁ ଶିକ୍ଷକ ଯଦି ଅନ୍ୟପିଲାଙ୍କୁ କରିବାକୁ ଦିଅନ୍ତି ତେବେ ତୁମେ ଖରାପ ଅନୁଭବ କର	☐ କିୟା ☐	ସଙ୍ଗେ ସଙ୍ଗେ ସେ କଥା ଭୁଲି ପକାଅ
୬.	ଗୁରୁଜନମାନେ ତୁମକୁ ଜଣେ ଦୁଷ୍ଟ ପିଲା ବୋଲି ଭାବନ୍ତି	☐ କିୟା ☐	ଭଦ୍ର ପିଲା ବୋଲି ଭାବନ୍ତି
୭.	ଅନ୍ୟପିଲାମାନେ ତୁମ ଦ୍ୱାରା ଉପକୃତ ହୁଅନ୍ତି ।	☐ କିୟା ☐	ସେମାନେ ତୁମକୁ ଦୟା କରନ୍ତି
୮.	ତୁମେ ବହୁତ ଗୁଡିଏ ଭୁଲ କରିପକାଅ	☐ କିୟା ☐	ଅଳ୍ପ ଭୁଲ୍ କର
୯.	ତୁମର ଚିନ୍ତାଧାରାକୁ ଲୋକମାନେ ଭଲ ପାଆନ୍ତି	☐ କିୟା ☐	ଭଲ ପାଆନ୍ତି ନାହିଁ

୧୦.	ତୁମେ ଯଦି ହର୍ଯ୍ୟଯାଅ, ପ୍ରତିକାର ବ୍ୟବସ୍ଥା କରିପାରିବ	☐ କିୟା ☐	ଧାଇଯ୍ୟା ଚୋଇଯାଏ

୧୧.	ସଂଗ୍ରହ କରିବାର ବିପରିତ ଅର୍ଥ ହେଉଛି ବିସ୍ତାର କରିବା	☐ କିୟା ☐	ଏକତ୍ରିତ କରିବା
		☐ କିୟା ☐	ସଂଚୟ କରିବା
		☐ କିୟା ☐	ଆଦୌ କରିବନି

୧୨.	ଯଦିକିଛି କରିବା ଭୁଲ୍ ଅଟେ ତଥାପି ତୁମେ ତାହା ବେଳେବେଳେ କରିବ	☐ କିୟା ☐	ଜଣେ ଶିକାରୀ ହେବାକୁ

୧୩.	ତୁମେ ଜଣେ ଶିକ୍ଷକ ହେବାକୁ ଇଚ୍ଛା କରିବ ।	☐ କିୟା ☐	ଜଣେ ଶିକାରୀ ହେବାକୁ

୧୪.	ଅନ୍ୟମାନେ କଥା ହେଉଥିବା ବେଳେ କିୟା ହସୁଥିବା ବେଳେ ତୁମେ ସେଠାରେ କାମ କରିପାରିବ ?	☐ କିୟା ☐	ସେମାନେ ନୀରବ ହେବା ପର୍ଯ୍ୟନ୍ତ ଅପେକ୍ଷା କରିବ

୧୫.	ଶୁଣିବା ଓ କାନ ଡେରିବାର ସଂପର୍କ ଯାହା ଅନୁଭବା ଓ ---- ର ସଂପର୍କ ତାହା	ଚାଲିବା ☐ କିୟା ☐ ଲକ୍ଷ୍ୟ କରିବା ☐ କିୟା ☐ ଦେଖିବା

୧୬.	ଶିକ୍ଷକ ତୁମକୁ ଅପରିଷ୍କାର ଓ ଅସାବଧାନ ବୋଲି ବେଳେବେଳେ କୁହନ୍ତି ।	☐ କିୟା ☐	କେବେବି ଏପରି କୁହନ୍ତି ନାହିଁ

୧୭.	ଖେଳ ପଡିଆରେ ତୁମେ ବହୁତ ପାଟିତୁଣ୍ଡ କର	☐ କିୟା ☐	ଧୀରସ୍ଥିର ଭାବରେ ଖେଳ

୧୮.	ତୁମେ ଉଡାଜାହାଜ ଚଳେଇ ଶିଖି ପାରିବ ବୋଲି ଭାବ	☐ କିୟା ☐	ଏହା କଷ୍ଟକର ହେବ ବୋଲି ଭାବ

୧୯.	୧୨, ୯, ୬ - ୬ର ପରବର୍ତ୍ତୀ କ୍ରମିକ ସଂଖ୍ୟା	୪ ☐ କିୟା ☐ ୩ କିୟା ☐ ୫

୨୦.	ଯଦି ଲୋକମାନେ ତୁମକୁ ବ୍ୟତିବ୍ୟସ୍ତ କରିପକାଇବେ ତୁମେ ଟିକିଏ ହସିଦେବ	☐ କିୟା ☐	ରାଗିଯିବ

୨୧.	ତୁମେ ନାଟକ ବହି ଲେଖିବାକୁ ଭଲ ପାଇବ	☐ କିୟା ☐	ନାଟକର ମୁଖ୍ୟ ନାୟକ ହେବାକୁ ଭଲ ପାଇବ

୨୨.	ତୁମେ କାଠ ଗଣ୍ଡି ଉପରେ ଭଲ ଚାଲିପାର	☐ କିୟା ☐	ଅନ୍ୟମାନେ ତୁମଠାରୁ ଭଲଭାବେ ଚାଲିପାରନ୍ତି ।

୨୩.	ପହଁରିବା, ଦୌଡିବା, ବସିବା ଓ ଉଠିବା ମଧ୍ୟରୁ କେଉଁଟି ଅଲଗା ?	ଦୌଡିବା ☐ କିୟା ☐ ଉଠିବା କିୟା ☐ ବସିବା

୨୪.	ଶ୍ରେଣୀରେ ତୁମେ ଧୀର ଭାବରେ ବସ	☐ କିୟା ☐	ଏଣେତେଣେ ବୁଲିବାକୁ ଭଲପାଅ

୨୫.	ଉପହାର ସ୍ୱରୂପ ଗୋଟିଏ ଖେଳସାମଗ୍ରୀ ପାଇଲେ ପ୍ରଥମେ ତୁମେ ତାହା ନିଜେ ଖୋଲିବାକୁ ଚେଷ୍ଟାକରିବ ।	☐ କିୟା ☐	ଅନ୍ୟକାହାଠୁ ଶିଖିବ

୨୬.	ତୁମେ ଗୋଟିଏ ଛୋଟ ଗେଣ୍ଡା କୁକୁର ରଖିବାକୁ ଭଲପାଇବ	☐ କିୟା ☐	ବଡ ଓ ଶକ୍ତିଶାଳୀ କୁକୁର ରଖିବାକୁ ଭଲ ପାଇବ

୨୭.	ରାମ ହରିଠାରୁ ଛୋଟ, ଶ୍ୟାମ ରାମଠାରୁ ଛୋଟ ତେବେ ସବୁଠାରୁ ବଡ କିଏ ?	ହରି ☐ କିୟା ☐ ଶ୍ୟାମ କିୟା ☐ ରାମ

୨୮.	ତୁମେ ଅନେକ ସମୟରେ ହତାଶ ଅନୁଭବ କର	☐ କିୟା ☐	କେବେକେବେ
୨୯.	ଶିକ୍ଷକ ତୁମକୁ ଖରାପ କରି ଗାଳିଦେଲେ ତୁମେ ମାଆଙ୍କ ପାଖରେ କହିବାବେଳେ କାନ୍ଦିପକାଅ	☐ କିୟା ☐	ମାଆଙ୍କ ପାଖରେ କହିବା ବେଳେ ହସିପକାଅ
୩୦.	ଗୋଟିଏ ଜଳ ଜାହାଜର ତୁମେ ଜଣେ କ୍ୟାପଟେନ୍ ହେବାକୁ ଭଲ ପାଇବ	☐ କିୟା ☐	ଯୁଦ୍ଧବେଳେ ବୁଡ଼ା ଜାହାଜର କ୍ୟାପ୍‌ଟେନ ହେବାକୁ ଭଲ ପାଇବ
୩୧.	କୁକୁରଟିଏ ତୁମକୁ ଦେଖି ଭୁକିଲେ ତୁମେ ତାକୁ ଚୁପ୍ କର ବୋଲି ପାଟି କରିବ ।	☐ କିୟା ☐	ସେ ତା କାମ ଠିକ୍ କରୁଛି ବୋଲି ଭାବିବ
୩୨.	ତୁମକୁ କଷ୍ଟ ହେଲେ ତୁମେ ତାହା ଶୀଘ୍ର ଭୁଲିଯାଅ ।	☐ କିୟା ☐	ବହୁତ ସମୟ ପର୍ଯ୍ୟନ୍ତ ବିରକ୍ତି ପ୍ରକାଶ କର
୩୩.	ତୁମେ ଗୋଟିଏ ବଡ ପୋକକୁ ଧରି ପାରିବ	☐ କିୟା ☐	ଛୁଇଁବାକୁ ଘୃଣା ଅନୁଭବ କରିବ ।
୩୪.	ତୁମେ ଆହୁରି ଭଲ ଦେଖାଯିବ ବୋଲି ଇଚ୍ଛାକର	☐ କିୟା ☐	ତୁମେ ବର୍ତ୍ତମାନ ଭଲ ଦେଖାଯାଉଛ
୩୫.	ସ୍କୁଲରୁ ତୁମେ ସିଧା ଘରକୁ ଯାଅ ।	☐ କିୟା ☐	ରାସ୍ତାରେ ଖେଳିବାକୁ ଲାଗ
୩୬.	କେଉଁ ଖେଳ ଖେଳିବାକୁ ହେବ ସେ ବିଷୟରେ ସିଦ୍ଧାନ୍ତ ନେବାକୁ ତୁମେ ବହୁତ ଚିନ୍ତା କର ।	☐ କିୟା ☐	ଯେଉଁ ଖେଳ ଖେଳିବ ସହଜରେ ସିଦ୍ଧାନ୍ତ କରିପାର ।
୩୭.	ତୁମେ ସ୍କୁଲକୁ ଯିବାକୁ ଇଚ୍ଛା କରିବ ।	☐ କିୟା ☐	କାର୍‌ରେ ଦୂର ଯାଗା ବୁଲିବାକୁ ଇଚ୍ଛା କରିବ ।
୩୮.	ଯଦି ତୁମେ ଗୋଟିଏ ବଡ ପଥର ଉପରେ ଛିଡ଼ାହୁଅ, ତୁମକୁ ଭୟ ଲାଗିବ	☐ କିୟା ☐	ତୁମେ ତା' ଉପରୁ ଚାରିଆଡ଼କୁ ଚାହିଁବ ।
୩୯.	ପାଇଥିବା ଉପହାର ତୁମେ ସଂଗେ ସଂଗେ ଖୋଲିପକାଅ	☐ କିୟା ☐	ଅପେକ୍ଷା କର
୪୦.	ଭବିଷ୍ୟତରେ କ'ଣ ହେବ ଭାବି ତୁମେ ଚିନ୍ତିଆ ହୋଇଯାଅ	☐ କିୟା ☐	ଚିନ୍ତିଆ ହୁଅ ନାହିଁ ।
୪୧.	ତୁମେ ଜଣେ ପଣ୍ଡିତାଙ୍କର ହେବାକୁ ଭଲ ପାଇବ	☐ କିୟା ☐	ବାଦ୍ୟବଜାଣିଆ ହେବାକୁ ଭଲ ପାଇବ
୪୨.	ତୁମେ ବେଲେବେଲେ ମୁଚ୍ଛା ହୋଇଯାଅ	☐ କିୟା ☐	ସେ ସମସ୍ୟା ନାହିଁ
୪୩.	ମାଆ ତୁମ ଉପରେ ରାଗିଗଲେ ବେଲେବେଲେ ତାଙ୍କର ଭୁଲ୍ ଥାଏ ।	☐ କିୟା ☐	ତୁମର ଭୁଲ୍ ଥାଏ
୪୪.	ତୁମର ବାପା ତୁମ ସହିତ କାମ କରନ୍ତି	☐ କିୟା ☐	ସେ ସବୁବେଲେ ବ୍ୟସ୍ତ ରୁହନ୍ତି ।
୪୫.	ଦୁଃଖ କାହାଣୀଟିଏ ଶୁଣିଲେ ତୁମ ଆଖିକୁ ଲୁହ ଆସିଯାଏ	☐ କିୟା ☐	ତୁମେ ସେ ବିଷୟରେ ବିଚଲିତ ହୁଅ ନାହିଁ ।

୪୬.	ଲୋକମାନେ ତୁମ ପ୍ରତି ଯଥେଷ୍ଟ ଦୃଷ୍ଟି ଦିଅନ୍ତି କି ?	☐ ନା/ହଁ ☐	ତୁମକୁ ଭଲ କାମ କଲ ଲୋକଂ ଦୃଷ୍ଟି ଟାଣିବାକୁ ହେବ ।
୪୭.	ପରୀକ୍ଷା ହଲ୍‌ରେ ଯଦି ପିଲାମାନେ ତୁମର ସାହାଯ୍ୟ ନେବା ପାଇଁ ଚାହିଁବେ, ତୁମେ ସାହାଯ୍ୟ କରିବନି ।	☐ କିୟା ☐	ଶିକ୍ଷକ ଆସିବା ପର୍ଯ୍ୟନ୍ତ ସାହାଯ୍ୟ କରିବ ।
୪୮.	ଯଦି ଲୋକମାନେ ତୁମକୁ ବହୁତ ଗୁଡ଼ିଏ କାମ କରିବାକୁ କହିବେ, ତୁମେ ସେଗୁଡ଼ିକ କରିବା ପାଇଁ ଗୋଟିଏ ଉପାୟ ପାଇ ପାରିବ	☐ କିୟା ☐	ସବୁ‌କାମକୁ ମିଶେଇ ଦେବ ।
୪୯.	ତୁମେ ଜଣେ ମହାକାଶଚାରୀ ହେବାକୁ ଭଲ ପାଇବ	☐ କିୟା ☐	ଜଣେ ଚିତ୍ର ଶିଳ୍ପୀ ହେବାକୁ ଭଲ ପାଇବ ।
୫୦.	ସକାଳେ ତୁମେ ପ୍ରଥମେ ମଜା କର	☐ କିୟା ☐	ତୁମକୁ ହାଲିଆ/ଅଳସୁଆ ଲାଗେ
୫୧.	ତୁମେ ଛୋଟ ଗଳ୍ପ ପଢ଼ିବାକୁ ଭଲ ପାଇବ	☐ କିୟା ☐	ବଡ ବହି ପଢ଼ିବାକୁ
୫୨.	ଚେଷ୍ଟାକରୁଥିବା ଅଧିକାଂଶ କାମରେ ତୁମେ ସଫଳ ହୁଅ	☐ କିୟା ☐	ବିଫଳ ହୁଅ
୫୩.	ଜଣେ ସାଙ୍ଗ ତୁମକୁ ଖରାପ ନାମଧରି ଡାକିଲେ ତୁମେ ତା ସହିତ କଳିଗୋଳ କରିବ ।	☐ କିୟା ☐	ତାହାକୁ ଖାତିର କର ନାହିଁ ବୋଲି ଛଳନା କରିବ ।
୫୪.	ଗୋଟିଏ ଜୋର୍ ଶବ୍ଦ ହେଲେ ତୁମେ ଡେଇଁ ପଡ଼ିବ ।	☐ କିୟା ☐	ଚାରିଆଡକୁ ଚାହିଁବ
୫୫.	ଅନ୍ୟମାନେ ଭୁଲ କଲେ ତୁମେ ହସିବ ।	☐ କିୟା ☐	ହସିବ ନାହିଁ
୫୬.	ତୁମେ ନିଜକୁ ଚତୁର ବୋଲି ଶୁଣିବାକୁ ଭଲ ପାଇବ	☐ କିୟା ☐	ଭଲ ଓ ଦୟାଳୁ ବୋଲି ଶୁଣିବାକୁ ଭଲ ପାଇବ
୫୭.	ତୁମେ ସ୍କୁଲରେ ପାଠ ପଢ଼ିବାକୁ ଭଲ ପାଇବ ।	☐ କିୟା ☐	ଖେଳ ଦେଖିବାକୁ ଭଲ ପାଇବ ।
୫୮.	ତୁମେ ଜାଣିଥିବା ସ୍ଥାନ ବିଷୟରେ ଯଦି ଲୋକମାନେ କଥା ହେଉଥିବେ ତୁମେ ସେମାନଙ୍କୁ ସ୍ଥାନଟି ବିଷୟରେ କହିଦେବ	☐ କିୟା ☐	ତୁମକୁ ପଚାରିବା ପର୍ଯ୍ୟନ୍ତ ଅପେକ୍ଷା କରିବ ।
୫୯.	ଭଲ ହେବା ପାଇଁ ଇଚ୍ଛା କରୁଥିବାରୁ ତୁମେ ଭଲ ପିଲା ।	☐ କିୟା ☐	ଖରାପ କାମ ନ କରୁଥିବା ଯୋଗୁଁ ତୁମେ ଭଲ ପିଲା ।
୬୦.	ତୁମର ସମସ୍ତଙ୍କ ସହିତ ଭଲ ପଡ଼େ	☐ କିୟା ☐	ଭଲ ପଡ଼େ ନାହିଁ
୬୧.	ତୁମର କୋଠରୀକୁ ଅନ୍ୟ କାହାଦ୍ୱାରା ପରିଚ୍ଛନ୍ନ ରଖିବାକୁ ତୁମେ ଭଲ ପାଇବ	☐ କିୟା ☐	ନିଜେ ପରିଷ୍କାର ପରିଚ୍ଛନ୍ନ ରଖିବାକୁ ଭଲ ପାଇବ ।
୬୨.	ଖାଦ୍ୟ ପଦାର୍ଥ ଭଲ ଲାଗୁ ନଥିଲେ ତୁମେ ଆପଭି କର ।	☐ କିୟା ☐	ସେପରି ଖାଇଦିଅ ।
୬୩.	ଭଲ ପିଲାମାନଙ୍କ ସମସ୍ତେ ଅଧିକ ଭଲ ପାଆନ୍ତି ।	☐ କିୟା ☐	ମଜା କୌତୁକିଆ କଥା କହୁଥିବା ପିଲାକୁ ଅଧିକ ଭଲ ପାଆନ୍ତି ।

୬୪.	ତୁମେ ଅଧିକ କଥା କୁହ ବୋଲି ମାଆ କହନ୍ତି ।	☐ କିୟା ☐	ତୁମେ ଜଣେ ଧୀରସ୍ଥିର ପିଲାବୋଲି କହନ୍ତି ।
୬୫.	ଛୋଟ ପିଲାମାନଙ୍କ ସହିତ ରହିଲେ ତୁମେ ଖୁସି ହେବ ।	☐ କିୟା ☐	ତୁମେ ସେମାନଙ୍କ ସହିତ ରହିପାରିବନି ।
୬୬.	ତୁମକୁ ନପଚାରି ସାଙ୍ଗମାନେ କିଛି ଗୋଟାଏ ନେଇଗଲେ ତୁମେ କିଛି ଭାବିବନି	☐ କିୟା ☐	ତୁମେ ରାଗିଯିବ ।
୬୭.	ତୁମ ସହିତ ମିଶୁଥିବା ଜଣେ ଶିକ୍ଷକଙ୍କୁ ତୁମେ ଅଧିକ ଭଲ ପାଇବ ।	☐ କିୟା ☐	ଜଣେ କଠୋର ଶିକ୍ଷକଙ୍କୁ
୬୮.	କିଛି ଗୋଟାଏ ସମସ୍ୟା କଷ୍ଟ ହେଲେ ତୁମେ ତାକୁ କିଛି ସମୟ ପାଇଁ ଛାଡିଦେବ ଓ ଭୁଲିଯିବ	☐ କିୟା ☐	ସମାଧାନ ଖୋଜି ବାହାର କରିବ
୬୯.	ଲୋକମାନେ ତୁମକୁ ଠଟ୍ଟା କଲେ ତୁମେ ରାଗିଯିବ ।	☐ କିୟା ☐	କିଛି ଭାବିବନି ।
୭୦.	ତୁମେ ରାଗିଯାଇଥିଲେ ଧୀର ଓ ନିଃଶବ୍ଦ ଭାବରେ କୋଠରୀକୁ ଯିବ	☐ କିୟା ☐	କବାଟକୁ ଜୋର୍‌ରେ ଧଡ୍‌ଧଡ କରିଯିବ ।

Attitude Towards Science Learning

ନାମ _____	ଶ୍ରେଣୀ _____
ବିଦ୍ୟାଳୟ _____	ତାରିଖ _____
ବାଳକ / ବାଳିକା _____	ବୟସ _____

ଏହି ପୁସ୍ତିକାରେ ବିଜ୍ଞାନ ଅଧ୍ୟୟନ ସମ୍ବନ୍ଧୀୟ କେତୋଟି ବାକ୍ୟ ଲେଖାଯାଇଛି । ପ୍ରତ୍ୟେକ ବାକ୍ୟ ପାଖରେ ତିନୋଟି ବାକ୍ସ ଅଛି । ବାକ୍ୟଗୁଡ଼ିକୁ ପଢ଼ ଓ ତୁମକୁ ସେଗୁଡ଼ିକ ଜିପରି ଲାଗୁଛି ଦର୍ଶାଇବା ପାଇଁ ନିର୍ଦ୍ଦିଷ୍ଟ ବାକ୍ସରେ (X) ଚିହ୍ନ ଦିଅ । ସମସ୍ତ ବାକ୍ୟ କୁ ଦର୍ଶାଅ । ତୁମର ଏହି ମତକୁ ସମ୍ପୂର୍ଣ୍ଣ ରୂପେ ଗୋପନୀୟ ରଖାଯିବ ।

		ସବୁବେଳେ	ବେଳେବେଳେ	ଆଦୌନୁହେଁ
୧-	ମୁଁ ବିଜ୍ଞାନ ପଢ଼ିବାକୁ ଭଲ ପାଏ ।	☐	☐	☐
୨-	ବିଜ୍ଞାନ ଆମକୁ ଯାନ୍ତ୍ରିକ ଓ ଯାନ୍ତ୍ରିକ ଦୌଶଳ ସମ୍ବନ୍ଧରେ ଜ୍ଞାନ ଦିଏ	☐	☐	☐
୩-	ବିଜ୍ଞାନ ଅଧ୍ୟୟନ କରିବା ଦ୍ୱାରା କେବଳ ମୂଲ୍ୟବାନ ସମୟ ନଷ୍ଟ ହିଁ ସାର ହୁଏ ।	☐	☐	☐
୪-	ଅନ୍ୟ ବିଷୟ ଅପେକ୍ଷା ବିଜ୍ଞାନ ବହୁତ ପରିମାଣରେ ଆମକୁ ଭବିଷ୍ୟତ ରେ ସାହାଯ୍ୟ କରିବ ।	☐	☐	☐
୫-	ବିଜ୍ଞାନ ଶିକ୍ଷା ସମସ୍ତଙ୍କ ପ୍ରତି ବାଧ୍ୟତାମୂଳକ ହେବା ଆବଶ୍ୟକ ।	☐	☐	☐
୬-	ମୁଁ ବିଜ୍ଞାନ ପ୍ରଦର୍ଶନୀ ଦେଖିବାକୁ ଭଲପାଏ ।	☐	☐	☐
୭-	ବିଦ୍ୟାଳୟ ର ପରୀକ୍ଷା ଗାରରେ ବୈଜ୍ଞାନିକ ଯନ୍ତ୍ରପାତି ଓ ରାସାୟନିକ ପଦାର୍ଥ ଇତ୍ୟାଦି ରହିବା କ୍ଷତିକାରକ ।	☐	☐	☐

		ସବୁବେଳେ	ବେଲେବେଳେ	ଆଦୌନୁହେଁ
୮-	ମୋତେ ବୈଜ୍ଞାନିକ ଯନ୍ତ୍ରପାତି ଓ ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ ଚିତ୍ର ଆଙ୍କିବାକୁ ଭଲଲାଗେ ।	☐	☐	☐
୯-	ବିଜ୍ଞାନ ବହିରେ ଥିବା ପ୍ରଶ୍ନଗୁଡ଼ିକ ର ଉତ୍ତର ମୁଁ ଠିକ୍ ଭାବେ ଲେଖେ ନାହିଁ ।	☐	☐	☐
୧୦-	ଭବିଷ୍ୟତ ପାଇଁ ବିଜ୍ଞାନ ଶିକ୍ଷା ମୂଲ୍ୟହୀନ।	☐	☐	☐
୧୧-	ମୋତେ ବିଜ୍ଞାନ ପଢ଼ିବାକୁ କଷ୍ଟ ଲାଗେ ।	☐	☐	☐
୧୨-	ବିଜ୍ଞାନ ଶିକ୍ଷକ ମାନେ ଦେଶ ବିଦେଶ ତଥା ସାମାଜିକ ଚାଲିଚଲଣ ବିଷୟରେ କମ ଜାଣି ଛନ୍ତି ।	☐	☐	☐
୧୩-	ମୁଁ ବିଜ୍ଞାନ ପଢ଼ି ଆନନ୍ଦ ପାଏ ।	☐	☐	☐
୧୪-	ବିଜ୍ଞାନ ଶିକ୍ଷା ଦ୍ୱାରା ଆମେ ପରିବେଶ ଓ ପ୍ରକୃତି ଇତ୍ୟାଦି ବିଷୟରେ ଜ୍ଞାନ ପାଇଥାଉ ।	☐	☐	☐
୧୫-	ବିଜ୍ଞାନ ଶିକ୍ଷକଙ୍କୁ ମୋତେ ଭଲ ଲାଗେ ।	☐	☐	☐
୧୬-	ଖବର କାଗଜ ଗୁଡ଼ିକ ରେ ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ ଲେଖା ରହିବା ଉଚିତ ନୁହେଁ।	☐	☐	☐
୧୭-	ବିଜ୍ଞାନ ଶିକ୍ଷା ପିଲାମାନଙ୍କର ମାନସିକ ପରିସର କୁ ବୃଦ୍ଧି କରେ ।	☐	☐	☐
୧୮-	ବିଜ୍ଞାନାଗାର ରେ ଅଯଥା ସମୟ ନଷ୍ଟ ନ କରି ସେହି ସମୟରେ ଖେଳିବା ଭଲ ଅଟେ ।	☐	☐	☐
୧୯-	ବିଜ୍ଞାନ ଶିକ୍ଷା ପ୍ରତି ମୋର ଆଗ୍ରହ ନ ଥିବା ଯୋଗୁଁ ଶ୍ରେଣୀରେ ବିଜ୍ଞାନ ଶିକ୍ଷା ଦିଆଯାଉଥିବା ବେଳେ ମୋତେ ବିରକ୍ତି ଲାଗେ ।	☐	☐	☐
୨୦-	ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ ପରୀକ୍ଷା କରିବାକୁ ମୋତେ ଭଲଲାଗେ ।	☐	☐	☐
୨୧-	ବିଜ୍ଞାନ ପଢ଼ିବା ଦ୍ୱାରା ମୁଁ ମୋର ସ୍ୱାସ୍ଥ୍ୟର ଅଧିକ ଯତ୍ନ ନିଏ ।	☐	☐	☐

ସବୁବେଳେ ବେଲେବେଳେ ଆଦୌନୁହେଁ

	ସବୁବେଳେ	କେବେକେବେ	ଆଦୌନୁହେଁ
୨୨- ବିଜ୍ଞାନ ଶ୍ରେଣୀରେ କାହେ ଶିକ୍ଷକ ପ୍ରଶ୍ନ ପଚାରିବେ ଭାବି ମୋତେଡର ଲାଗେ ।	☐	☐	☐
୨୩- ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ ଟିକିନି ବୁଝନ ପାରିଲେ ଶିକ୍ଷକ ତଥା ଅନ୍ୟ ସାଙ୍ଗମାନଙ୍କ ଠାରୁ ବୁଝିବାକୁ ଇଚ୍ଛା ହୁଏ ।	☐	☐	☐
୨୪- ବିଜ୍ଞାନ ଶିକ୍ଷା ଦ୍ୱାରା ପିଲାମାନେ ନିଷ୍ଠୁର ଓ ସ୍ୱାର୍ଥପର ହୋଇଯାଆନ୍ତି ।	☐	☐	☐
୨୫- ବିଜ୍ଞାନ ଶିକ୍ଷା ମାନବ ଜାତି ର ଧ୍ୱଂସ ର କାରଣ ହୋଇପାରେ ।	☐	☐	☐
୨୬- ବିଜ୍ଞାନ ଶିକ୍ଷକଙ୍କ ସହିତ ମିଶିବାକୁ ମୋତେ ଭଲ ଲାଗେ ନାହିଁ ।	☐	☐	☐
୨୭- ବିଜ୍ଞାନ ବହି ଓ ଉପକରଣ ଉପରେ ଅଧିକ ମୁଦ୍ରା ଖର୍ଚ୍ଚ କରିବା ଅପବ୍ୟୟ ଅଟେ ।	☐	☐	☐
୨୮- ବୈଜ୍ଞାନିକ ମାନଙ୍କ ସହିତ ବିଜ୍ଞାନ ବିଷୟରେ କଥାବାର୍ତ୍ତା ହେବାକୁ ମୁଁ ଭଲ ପାଇବି ।	☐	☐	☐
୨୯- ଖବର କାଗଜ ଇତ୍ୟାଦି ରେ ବିଜ୍ଞାନ ଖବର ଗୁଡିକ ମୁଁ ପ୍ରଥମେ ପଢ଼େ ।	☐	☐	☐
୩୦- ବିଜ୍ଞାନାଗାରେ ନିଜେ ପରୀକ୍ଷା କରିବା ଯୋଗୁଁ ମୋତେ ଭଲ ଲାଗେନି ।	☐	☐	☐
୩୧- ବିଜ୍ଞାନ ଶ୍ରେଣୀରେ ଶିକ୍ଷକ ପଚାର ଥିବା କେନେ ମୋତେ ଭଲ ଲାଗେନି ।	☐	☐	☐
୩୨- ବିଦ୍ୟାଳୟ ରେ ଅନ୍ୟ ବିଷୟ ଅପେକ୍ଷା ବିଜ୍ଞାନ ଅଧିକ ସମୟ ପଢ଼ାଯିବା ଆବଶ୍ୟକ ।	☐	☐	☐
୩୩- ବିଜ୍ଞାନ ଶିକ୍ଷକ ପ୍ରଶ୍ନ ପଚାରିବା କେନେ ମୋତେ ନ ପଚାରି ଅନ୍ୟମାନଙ୍କୁ ପଚାରନ୍ତୁ ବୋଲି ମୁଁ ଆଶାକରେ ।	☐	☐	☐
୩୪- ବିଜ୍ଞାନ ଶିକ୍ଷା ଆମ ଠାରେ ରହିଥିବା ଅନ୍ଧ ବିଶ୍ୱାସକୁ ଦୂରେଇ ଦିଏ ।	☐	☐	☐
୩୫- ଅନ୍ୟକେହି ବିଜ୍ଞାନ ବିଷୟରେ କଥାବାର୍ତ୍ତା ହେଉଥିଲେ ମୋତେ ଶୁଣିବାକୁ ଭଲଲାଗେ ।	☐	☐	☐

	ସବୁବେଳେ	ବେଳେବେଳେ	ଆଦୌନୁହେଁ
୩୬- ମୁଁ ବିଜ୍ଞାନ ପଢ଼ିବା ସଙ୍ଗେ ସଙ୍ଗେ ତା ସହ ଥିବା ସଂପୃକ୍ତ ଚିତ୍ରକୁ ଦେଖେ ।			
୩୭- ବିଜ୍ଞାନ ବହିରେ ଥିବା ପ୍ରଶ୍ନୋତ୍ତର କୁ ମୁଁ ନିଜେ ସମାଧାନ କରେ ।			
୩୮- ବଡ଼ ବଡ଼ ବୈଜ୍ଞାନିକ ମାନଙ୍କର ଲେଖା ପଢ଼ିବାକୁ ମୋତେ ଭଲଲାଗେ ।			
୩୯- ଅନ୍ୟାନ ପାଠର ଚାପ ହେତୁ ବିଜ୍ଞାନ ପ୍ରଶ୍ନୋତ୍ତର ଓ ଗୃହବର୍ମ ଗୁଡ଼ିକୁ ମୁଁ ଅନ୍ୟମାନଙ୍କ ଠାରୁ ଟିପିଦିଏ ।			
୪୦- ଆସନ୍ତା କାଲି ସ୍କୁଲରେ ପଢ଼ାହେବାକୁ ଥିବା ବିଜ୍ଞାନ ବିଷୟକୁ ମୁଁ ଆଗରୁ ପଢ଼ିଦିଏ ।			
୪୧- ବୈଜ୍ଞାନିକ ମାନଙ୍କ ବିଷୟରେ ଜାଣିବାକୁ ମୋର ଇଚ୍ଛା ହୁଏ ।			
୪୨- ମୋତେ ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ ଲେଖା ଲେଖିବାକୁ ଭଲ ଲାଗେ ।			
୪୩- ସମସ୍ତେ ବିଜ୍ଞାନ ପଢ଼ିବା ଉଚିତ ।			
୪୪- ରେଡିଓ ଓ ଟିଭି ରେ ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ କାର୍ଯ୍ୟକ୍ରମ ମୋତେ ଭଲଲାଗେ ।			
୪୫- ପରୀକ୍ଷା ନିରୀକ୍ଷା ବିନା ବିଜ୍ଞାନ ପଢ଼ା ନିରର୍ଥକ ।			
୪୬- ବିଜ୍ଞାନ ଶିକ୍ଷକ ଶ୍ରେଣୀରେ ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ ପରୀକ୍ଷା କଲେ ମୋତେ ଭଲ ଲାଗେ ।			
୪୭- ଅଧିକାଂଶ ବିଜ୍ଞାନ ପାଠ ନ ବୁଝି ମୁଁ ଘୋଷିଦିଏ ।			
୪୮- ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ ଗୁରୁତ୍ୱ ପୂର୍ଣ୍ଣ ସ୍ଥାନ ଗୁଡ଼ିକୁ ପରିଭ୍ରମଣ କରିବାକେବଳ ସମୟ ର ଅପବ୍ୟୟ ଅଟେ ।			
୪୯- ବିଦ୍ୟାଳୟ ରେ ବିଜ୍ଞାନ ସମ୍ବନ୍ଧୀୟ ଲେଖା ଓ ପ୍ରତିଯୋଗିତା ହେବା ଆବଶ୍ୟକ ।			
୫୦- ମୁଁ ଘରେ ବିଜ୍ଞାନ ପଢ଼ିବାକୁ ଭଲ ପାଏ ନାହିଁ ।			

ଦକ୍ଷତା ଭିତ୍ତିକ ବିଜ୍ଞାନ ଉପଲବ୍ଧି ପରୀକ୍ଷଣ

(୫ମ ଶ୍ରେଣୀ ଶିକ୍ଷାର୍ଥୀଙ୍କ ପାଇଁ)

ସଠିକ୍ ଉତ୍ତରରେ ଠିକ୍ ଚିହ୍ନ (√) ଦିଅ

ପୂର୍ଣ୍ଣ ସଂଖ୍ୟା – ୫୦

ସମୟ : ୧ ଘଣ୍ଟା

୧. ନିମ୍ନଲିଖିତ ମଧ୍ୟରୁ ଯେଉଁମାନଙ୍କର ନିଜର ଆଲୋକ ଅଛି ସେମାନଙ୍କୁ ଦର୍ଶାଅ ।

(କ) ଚନ୍ଦ୍ର ☐ (ଖ) ସୂର୍ଯ୍ୟ ☐

(ଗ) ପୃଥ୍ବୀ ☐ (ଘ) ମଙ୍ଗଳ ଗ୍ରହ ☐

୨. କେଉଁ ବଳ ଯୋଗୁଁ ଜଳସ୍ରୋତ ଉଚ୍ଚ ସ୍ଥାନରୁ ନିମ୍ନ ସ୍ଥାନକୁ ବହିଯାଏ ?

(କ) ମାଧ୍ୟାକର୍ଷଣ ବଳ ☐ (ଖ) ସ୍ଥାନବଳ ☐

(ଗ) ବୈଦ୍ୟୁତିକ ବଳ ☐ (ଘ) ଘର୍ଷଣ ବଳ ☐

୩. ସୂର୍ଯ୍ୟୋପରାଗ କେତେ ବେଳେ ହୁଏ ?

(କ) ଚନ୍ଦ୍ର ଓ ସୂର୍ଯ୍ୟ ମଧ୍ୟରେ ପୃଥ୍ବୀ ରହିଲେ ☐ (ଖ) ସୂର୍ଯ୍ୟ ଓ ପୃଥ୍ବୀ ମଧ୍ୟରେ ଚନ୍ଦ୍ର ରହିଲେ ☐

(ଗ) ଚନ୍ଦ୍ର ଓ ପୃଥ୍ବୀ ମଧ୍ୟରେ ସୂର୍ଯ୍ୟ ରହିଲେ ☐ (ଘ) ଚନ୍ଦ୍ରର ଛାଇ ପୃଥ୍ବୀ ଉପରେ ପଡ଼ିଲେ ☐

୪. ଚନ୍ଦ୍ର ପୃଥ୍ବୀ ଠାରୁ କେତେ ଦୂରରେ ଅବସ୍ଥିତ ?

(କ) ପ୍ରାୟ ଚାରି ହଜାର କିଲୋମିଟର ☐ (ଖ) ପ୍ରାୟ ଚାରି ଲକ୍ଷ କିଲୋମିଟର ☐

(ଗ) ପ୍ରାୟ ପାଞ୍ଚ ହଜାର କିଲୋମିଟର ☐ (ଘ) ପ୍ରାୟ ପାଞ୍ଚ ଲକ୍ଷ କିଲୋମିଟର ☐

୫. ଚନ୍ଦ୍ର ଗ୍ରହଣ ସମୟରେ କ'ଣ ହୋଇଥାଏ ?

(କ) ଚନ୍ଦ୍ରର ଛାଇ ପୃଥ୍ବୀ ଉପରେ ପଡ଼େ ☐ (ଖ) ସୂର୍ଯ୍ୟ ଓ ଚନ୍ଦ୍ର ମଧ୍ୟରେ ପୃଥ୍ବୀ ଏକ ସରଳ ରେଖାରେ ଥାଏ ☐

(ଗ) ସୂର୍ଯ୍ୟ ଓ ଚନ୍ଦ୍ର ମଧ୍ୟରେ ପୃଥ୍ବୀ ଏକ ସରଳ ରେଖାରେ ଏକ ସମତଳରେ ଥାଏ ☐

(ଘ) ଚନ୍ଦ୍ର ଓ ପୃଥ୍ବୀ ମଧ୍ୟରେ ସୂର୍ଯ୍ୟ ଏକ ସରଳ ରେଖରେ ଥାଏ ☐

୬. ଛାୟା ଦ୍ୱାରାସମୟ ନିର୍ଣ୍ଣୟ କରିହୁଏ । ସୂର୍ଯ୍ୟକିରଣ ପଡୁଥିବା ଏକ ଖୋଲା ପଡ଼ିଆରେ ପୋତା ଯାଇଥିବା ଏକ ବାଉଁଶ ଖୁଣ୍ଟର ଛାଇକୁ ଦିନ ୧୨ଟା ଓ ଦିନ ୩ଟାରେ ଲକ୍ଷ କଲେ ଛାଇର ଦୈର୍ଘ୍ୟର କ'ଣ ପରିବର୍ତ୍ତନ ହେବ ।

(କ) ବଢ଼ିବ ☐ (ଖ) କମିବ ☐

(ଗ) ସମାନ ରହିବ ☐ (ଘ) ବିନ୍ଦୁ ଭଳି ହୋଇଯିବ ☐

୭. ନିମ୍ନଲିଖିତ ପଦାର୍ଥ ଗୁଡ଼ିକ ମଧ୍ୟରୁ କେଉଁଟି ଅସ୍ୱଚ୍ଛ ପଦାର୍ଥ ?

(କ) କାଗଜ ☐ (ଖ) ଜଳ ☐

(ଗ) କାଚ ☐ (ଘ) ପଲିଥିନ୍ ☐

୮. କେଉଁ ବସ୍ତୁଟି ଅନ୍ୟ ବସ୍ତୁମାନଙ୍କ ଠାରୁ ସଂପୂର୍ଣ୍ଣ ଅଲଗା ?

(କ) ଲୁହା ☐ (ଖ) ଦସ୍ତା ☐

(ଗ) ଅଭ୍ର ☐ (ଘ) ସୁନା ☐

୯. କାଠ ହାଣିବା ପାଇଁ ଆମେ କୁରାଢ଼ି ବ୍ୟବହାର କରୁ । ଏହା କାହାର ଦୃଷ୍ଟାନ୍ତ ?

(କ) ଓୟେଜ୍ ☐ (ଖ) ହାତୁଡ଼ି ☐

(ଗ) ଜଟିଳ ଯନ୍ତ୍ର ☐

୧୦. ଗୋଟିଏ ବଡ଼ ପଥରଟିକୁ ହାତରେ ଟେକି ଘୁଞ୍ଚାଇବା ଅପେକ୍ଷା ଶାବଳରେ ଘୁଞ୍ଚାଇବା ସହଜ କାରଣ –

(କ) ଏହା ଏକ ସରଳ ଯନ୍ତ୍ର ☐ (ଖ) କମ୍ ଶକ୍ତି ପ୍ରୟୋଗ କରିବାକୁ ହୁଏ ☐

(ଗ) ହାତ ଓ ଶାବଳ ମଧ୍ୟରେ ଘର୍ଷଣ ହୁଏ ☐ (ଘ) ଶାବଳଟି ମାଟି ଭିତରେ ରହିଯାଏ ☐

୧୧. ଗୋଟିଏ ଓଜନିଆ ବସ୍ତୁକୁ ତଳୁ ଉପରକୁ ଉଠାଇବା ପାଇଁ ଆମେ କ'ଣ କଲେ ତାହା ସହଜରେ ଉପରକୁ ଉଠିବ ?

(କ) ବସ୍ତୁଟିକୁ ଟେକିଦେବା ☐ (ଖ) ବସ୍ତୁଟିକୁ ଦଉଡ଼ିରେ ଟାଣି ଦେବା ☐

(ଗ) କାଠ ପଟାକୁ ତେଣ୍ଟା ଭାବରେ ପକାଇ ପଟା ଉପରେ ବସ୍ତୁଟିକୁ ଗଡ଼ାଇ ଗଡ଼ାଇ ନେବା ☐

(ଘ) ଏହା ମଧ୍ୟରୁ କିଛି ନୁହେଁ ☐

୧୨. ବ୍ରେକ୍ ଦେଲେ କେଉଁ ବଳ ଯୋଗୁଁ ସାଇକେଲଟି ବନ୍ଦ ହୁଏ ?

(କ) ମାଧ୍ୟାକର୍ଷଣ ବଳ ☐ (ଖ) ପୃଷ୍ଠ ବଳ ☐

(ଗ) ଘର୍ଷଣ ବଳ ☐ (ଘ) ମାଂସପେଶୀୟ ବଳ ☐

୧୩. ବାଲ୍ଟିରେ ପାଣି ନେବାରେ କେଉଁ ବଳର ପ୍ରୟୋଗ ହୋଇଥାଏ ?

(କ) ଯନ୍ତ୍ରବଳ ☐ (ଖ) ମାଂସପେଶୀୟ ବଳ ☐

(ଗ) ମାଧ୍ୟାକର୍ଷଣ ବଳ ☐ (ଘ) ଘର୍ଷଣ ବଳ ☐

୧୪. ଏଥୁ ମଧ୍ୟରୁ କେଉଁଟି ଏକ ପ୍ରାକୃତିକ ସଂପଦ ?

(କ) ରେଡ଼ିଓ ☐ (ଖ) କାଗଜ ☐

(ଗ) ଦର୍ପଣ ☐ (ଘ) ଲୁହା ☐

୧୫. ନିମ୍ନ ଲିଖିତ ପଦାର୍ଥ ଗୁଡ଼ିକ ମଧ୍ୟରୁ କେଉଁଟି ଉଡ଼ାଜାହାଜରେ ଜାଳେଣି ରୂପେ ବ୍ୟବହାର କରାଯାଏ ?

(କ) କିରୋସିନ୍ ☐ (ଖ) ପେଟ୍ରୋଲ ☐

(ଗ) ଡିଜେଲ ☐ (ଘ) ଗ୍ୟାସୋଲିନ୍ ☐

୧୬. ମନୁଷ୍ୟ ବ୍ୟବହାର କରୁଥିବା ପଦାର୍ଥ ଗୁଡ଼ିକ ମଧ୍ୟରୁ କେଉଁଟି ଉଦ୍ଭିଦରୁ ପ୍ରସ୍ତୁତ ନୁହେଁ ?

(କ) ପୋଷାକ ☐ (ଖ) ଖାଦ୍ୟ ☐

(ଗ) ବହିଖାତା ☐ (ଗ) ଯନ୍ତ୍ରପାତି ☐

୧୭. ନିମ୍ନଲିଖିତ କେଉଁ କାର୍ଯ୍ୟ ପାଇଁ ମୃତ୍ତିକାର ଆବଶ୍ୟକତା ନାହିଁ ?

(କ) ଖାଦ୍ୟ ଶସ୍ୟ ଉତ୍ପାଦନ କରିବା ☐ (ଖ) ବୃକ୍ଷରୋପଣ କରିବା ☐

(ଗ) ହାଣ୍ଡି ଗଢ଼ିବା ☐ (ଘ) ଅଳଙ୍କାର ପ୍ରସ୍ତୁତ କରିବା ☐

୧୮. ସଜୀବ ଗୋଟିଏ ଜାଗାରୁ ଅନ୍ୟ ଜାଗାକୁ ଗତି କରିପାରେ । ତଳେ ଦିଆଯାଇଥିବା ଉଦାହରଣଗୁଡ଼ିକ ମଧ୍ୟରୁ କେଉଁଟି ଭୁଲ୍ ?

(କ) ଜିଆ ମାଟିରେ ଗତିକରେ ☐ (ଖ) ମେଘ ଆକାଶରେ ଗତି କରେ ☐

(ଗ) ମାଛ ପାଣିରେ ଗତି କରେ ☐ (ଘ) କୁକୁର ଦୌଡ଼େ ☐

୧୯. ମନୁଷ୍ୟର କେଉଁ ଅଙ୍ଗଟି ପଞ୍ଜରା ହାଡ଼ ଦ୍ୱାରା ଢାଙ୍କି ହୋଇ ରହିଛି ?

(କ) ଫୁସ୍ ଫୁସ୍ ☐ (ଖ) ସୁଷୁମ୍ନା କାଣ୍ଡ ☐

(ଗ) ମସ୍ତିଷ୍କ ☐ (ଘ) ମୂତ୍ରାଶୟ ☐

୨୦. କେଉଁ ଜୀବସାର ଅଭାବରୁ ଦାନ୍ତରୁ ରକ୍ତ ପଡ଼େ ?

(କ) ଜୀବସାର କ ☐ (ଖ) ଜୀବସାର ଖ ☐

(ଗ) ଜୀବସାର ଗ ☐ (ଘ) ଜୀବସାର ଘ ☐

୨୧. କେଉଁ ରୋଗ ଦୂଷିତ ଜଳଦ୍ୱାରା ବ୍ୟାପିଥାଏ ?

(କ) ମ୍ୟାଲେରିଆ ☐ (ଖ) ଧନୁଷ୍କାର ☐

(ଗ) ଡିପ୍‌ଥେରିଆ ☐ (ଘ) ଟାଇଫଏଡ୍ ☐

୨୨. ନିରାମିଷ ଖାଦ୍ୟ ଖାଉଥିବା ଗୋଟିଏ ୧୦-୧୨ ବର୍ଷ ବାଳକ ସୁଷମ ଖାଦ୍ୟ ପାଇବା ପାଇଁ କେତେ ଗ୍ରାମ କ୍ଷୀର ପିଇବା ଦରକାର ?

(କ) ୧୦୦୦ ☐ (ଖ) ୭୫୦ ☐

(ଗ) ୫୦୦ ☐ (ଘ) ୨୫୦ ☐

୨୩. ନିମ୍ନଲିଖିତ ରୋଗଗୁଡ଼ିକ ମଧ୍ୟରୁ କେଉଁଟି ବାୟୁ ଦ୍ୱାରା ସଂକ୍ରମିତ ହୁଏ ?

(କ) ବସନ୍ତ ☐ (ଖ) ମ୍ୟାଲେରିଆ ☐

(ଗ) ହଇଜା ☐ (ଘ) ବାତ ଜ୍ୱର ☐

୨୪. ସ୍ୱାସ୍ଥ୍ୟ ରକ୍ଷା ପାଇଁ ଅଳିଆ ଆବର୍ଜନାକୁ

(କ) ଗାତ ଖୋଳି ପୋତିବା ☐ (ଖ) ପୋଡ଼ି ଦେବା ☐

(ଗ) ଘର ବାହାରେ ଗଦାଇ ରଖିବା ☐ (ଘ) ଏଣେ ତେଣେ ପକାଇବା ☐

୨୫. ମ୍ୟାଲେରିଆ ଜ୍ୱର ନ ହେବା ପାଇଁ ଆମେ କ'ଣ କରିବା ?

(କ) ମାଂସାରି ପକାଇ ଶୋଇବା ☐ (ଖ) ଝରକା କବାଟ ବନ୍ଦ କରି ରଖିବା ☐

(ଗ) ନାଳ ନର୍ଦ୍ଦମାରେ ମଶା ତେଲ ପକାଇବା ☐ (ଘ) ଘର ନିକଟରୁ ଗଛ ସବୁ କାଟି ସଫା ରଖିବା ☐

୨୬. କନା ଓ କାଗଜ ଜାତୀୟ ଆବର୍ଜନାକୁ କାର୍ଯ୍ୟରେ ବ୍ୟବହାର କରାଯାଇ ପାରିବ ।

(କ) ଜୈବ ବାଷ୍ପ ପ୍ରସ୍ତୁତ କରିବାରେ ☐ (ଖ) କାର୍ଡବୋର୍ଡ ପ୍ରସ୍ତୁତ କରିବାରେ ☐

(ଗ) କମ୍ପୋଷ୍ଟ ଖତ ପ୍ରସ୍ତୁତ କରିବାରେ ☐ (ଘ) ପ୍ଲାଷ୍ଟିକ୍ ଦ୍ରବ୍ୟ ପ୍ରସ୍ତୁତ କରିବାରେ ☐

୨୭. ସହର ଅଞ୍ଚଳ ଓ ଗ୍ରାମ ଅଞ୍ଚଳରେ ଖୋଲା ନାଳର ବ୍ୟବସ୍ଥା କରାଯିବାର କାରଣ କ'ଣ ?

(କ) ବାଡ଼ି, ବଗିଚାରେ ପାଣି ମଡ଼ାଇବା ☐ (ଖ) ଘରର ଅଳିଆ ଆବର୍ଜନାକୁ ନାଳପାଣି ସୁଅରେ ବସାଇ ଦେବା ☐

(ଗ) ବର୍ଷାପାଣି ଓ ଅନାବଶ୍ୟକ ପାଣିର ନିଷ୍କାସନ କରିବା ☐ (ଘ) ମଶାର ବଂଶ ବିସ୍ତାର ରୋକିବା ☐

୨୮. ମନୁଷ୍ୟ ଶରୀରରେ ମୋଟ କେତେ ଖଣ୍ଡ ହାଡ଼ ରହିଛି ?

(କ) ୬୦୭ ☐ (ଖ) ୨୦୬ ☐

(ଗ) ୪୪୬ ☐ (ଘ) ୨୦୮ ☐

୨୯. କାହା ଯୋଗୁଁ ଅଙ୍ଗ ପ୍ରତ୍ୟଙ୍ଗ ଚାଳନା ସହଜ ହୁଏ ?

(କ) ଶିରା ☐ (ଖ) ସ୍ନାୟୁ ☐

(ଗ) ହାଡ଼ ☐ (ଘ) ଖଣ୍ଡା ☐

୩୦. ମନୁଷ୍ୟ ଶରୀରରେ କେଉଁ ଅଂଶରେ ସ୍ଥିର ଖଣ୍ଡା ରହିଛି ?

(କ) ଖପୁରୀ ☐ (ଖ) ଆଙ୍ଗୁଳି ☐

(ଗ) ପାଟି ☐ (ଘ) ଆଣ୍ଠୁ ☐

୩୧. ମାଛ ପାଣି ଭିତରେ ବଂଚି ରହେ କିନ୍ତୁ ବାହାରକୁ କାଢ଼ି ଆଣିଲେ ଅଳ୍ପ ସମୟରେ ମରିଯାଏ କାରଣ

(କ) ବାୟୁରେ ଥିବା ଅମ୍ଳଜାନ ଗ୍ରହଣ କରିପାରେ ନାହିଁ ☐ (ଖ) ସନ୍ତରଣ କରିପାରେ ନାହିଁ ☐

(ଗ) ଖାଦ୍ୟ ଖାଇପାରେ ନାହିଁ ☐ (ଗ) ଗରମ ସହିପାରେ ନାହିଁ ☐

୩୨. ପ୍ରାଣୀ ଓ ଉଦ୍ଭିଦ କେଉଁ ଗୁଣରେ ଭିନ୍ନ ?

(କ) ଶରୀର ବୃଦ୍ଧି ☐ (ଖ) ଖାଦ୍ୟ ପ୍ରସ୍ତୁତି ☐

(ଗ) ଶ୍ୱାସ କ୍ରିୟା ☐ (ଘ) ଗତି ଶକ୍ତି ☐

୩୩. ମରୁ ଅଞ୍ଚଳରେ ନାଗଫେଣୀ ଜାତୀୟ ଉଦ୍ଭିଦ ବଂଚି ରହେ, କାରଣ

(କ) ଗଛର ଚେର ବହୁ ଦୂରଯାଏ ଲମ୍ଭି ରହିଥାଏ ☐ (ଖ) କଣ୍ଟାଯୁକ୍ତ କାଣ୍ଡ ଶତ୍ରୁ ଆକ୍ରମଣରୁ ରକ୍ଷା କରେ ☐

(ଗ) କାଣ୍ଡରେ ଜଳ ସଂଗ୍ରହ କରି ରଖେ ☐ (ଘ) କାଣ୍ଡରେ ପତ୍ର ନଥାଏ ☐

୩୪. କେଉଁ ଋତୁରେ ଧାନ ଅମଳ ହୁଏ ?

(କ) ଗ୍ରୀଷ୍ମ ☐ (ଖ) ବର୍ଷ ☐

(ଗ) ଶୀତ ☐ (ଘ) ବସନ୍ତ ☐

୩୫ କେଉଁ ରତୁରେ ବେଙ୍ଗମାନେ ଅଣ୍ଡା ଦିଅନ୍ତି ?

(କ) ବର୍ଷା ☐ (ଖ) ଗ୍ରୀଷ୍ମ ☐

(ଗ) ଶରତ ☐ (ଘ) ଶୀତ ☐

୩୬. ଗୋଟିଏ ଜଳପୂର୍ଣ୍ଣ କାଚ ଗ୍ଲାସ ଉପରେ ପୋଷ୍ଟ କାର୍ଡଟିଏ ରଖି, ଧୀରେ ଧୀରେ ଓଲଟାଇ ଦେଲେ ତାହା ଖସି ନପଡ଼ି ଗ୍ଲାସରେ ଲାଗି ରହେ କାରଣ -

(କ) ବାୟୁର ଚାପ ☐ (ଖ) ଗ୍ଲାସର ସମତଳ ଧାର ☐

(ଗ) ଜଳର ଓଜନ ☐ (ଘ) ଗ୍ଲାସର ଓଜନ ☐

୩୭. କେଉଁ ଗ୍ୟାସ୍ ଜଳିବାରେ ସାହାଯ୍ୟ କରେ ?

(କ) ଅମ୍ଳଜାନ ☐ (ଖ) ଅଙ୍ଗାରକାମ୍ଳ ☐

(ଗ) ଯବକ୍ଷାରଜାନ ☐ (ଘ) ଉଦ୍‌ଯାନ ☐

୩୮. ବାୟୁ ଦୂଷିତ ହେବାର ମୁଖ୍ୟ କାରଣ ହେଲା -

(କ) ବାୟୁରେ ଧୂଳିକଣା ପରିମାଣ କମ୍ ହେବା ☐ (ଖ) ବାୟୁରେ ଅମ୍ଳଜାନର ପରିମାଣ ବୃଦ୍ଧି ହେବା ☐

(ଗ) ବାୟୁରେ ଅଙ୍ଗାରକାମ୍ଳର ପରିମାଣ ବୃଦ୍ଧି ହେବା ☐ (ଗ) ବାୟୁରେ ଜଳୀୟବାଷ୍ପ ପରିମାଣ ବୃଦ୍ଧି ହେବା ☐

୩୯. କଳକାରଖାନା ସାଧାରଣତଃ ଜନବସତି ଠାରୁ ଦୂରରେ ପ୍ରତିଷ୍ଠା କରାଯିବାର ମୁଖ୍ୟ କାରଣ ହେଲା -

(କ) କଳକାରଖାନାରୁବାହାରୁଥିବା ଧୂଆଁ ବାୟୁ ପ୍ରଦୂଷଣ କରେ ☐ (ଖ) କଳକାରଖାନାରେ ଗଣ୍ଡଗୋଳଲାଗି ରହେ ☐

(ଗ) କଳକାରଖାନା ଯୋଗୁଁ ରାସ୍ତା ଗହଳି ରହେ ☐ (ଘ) କଳକାରଖାନାକୁ ଶ୍ରମିକ ମାନଙ୍କ ଯିବା ପାଇଁ ସୁବିଧା ହୁଏ ☐

୪୦ ନିମ୍ନ ଲିଖିତ ପଦାର୍ଥରୁ କେଉଁଟି ରାସାୟନିକ ସାର ନୁହେଁ ?

(କ) ୟୁରିଆ ☐ (ଖ)ପଟାସ ☐

(ଗ) ଗୋବର ଖତ ☐ (ଘ) ପଟାସିୟମ ସଲ୍‌ଫେଟ୍ ☐

୪୧. ବାୟୁ ଦୂଷିତ କରିବାରେ ନିମ୍ନଲିଖିତ ପଦାର୍ଥ ଗୁଡ଼ିକରୁ କେଉଁଟି ସାହାଯ୍ୟ କରେ ନାହିଁ ?

(କ) ଧୂଆଁ ☐ (ଖ) ଯାନବାହାନରୁ ନିର୍ଗତ ଗ୍ୟାସ ☐

(ଗ) ଧୂଳିକଣା ☐ (ଘ) ଜଳୀୟ ବାଷ୍ପ ☐

୪୨. ଜଳରେ ଦ୍ରବୀଭୂତ ପଦାର୍ଥକୁ କେଉଁ କ୍ରିୟାରେ ପୃଥକ କରାଯାଏ ?

(କ) ପାତନ ☐ (ଖ) ବାଷ୍ପୀକରଣ ☐

(ଗ) ଅବକ୍ଷେପଣ ☐ (ଘ) ପରିସ୍ରବଣ ☐

୪୩. କେଉଁ ପ୍ରକାର ମାଟିରେ ପାଣି କମ୍ ଧରି ରଖେ ?

(କ) ବାଲିଆ ☐ (ଖ) ମଟାଳ ☐

(ଗ) ଦୋରସା ☐ (ଘ) କାଦୁଆ ☐

୪୪ କୌଣସି ଜମିରେ ଏକ ନିର୍ଦ୍ଦିଷ୍ଟ ଫସଲ କଲେ ଜମିରୁ କ'ଣ କମିଯାଏ ?

(କ) ସାର ☐ (ଖ) ମାଟି ☐

(ଗ) ବାଲି ☐ (ଘ) ଜଳ ☐

୪୫. ମଞ୍ଜିରୁ ଗଛ ହେବା ପାଇଁ କ'ଣ ଦରକାର ?

(କ) ଜଳ ☐ (ଖ) ବାୟୁ ☐

(ଗ) ଉତ୍ତାପ ☐ (ଘ) ଉପରୋକ୍ତ ସବୁ ☐

୪୬. ପ୍ରାଣୀ ଓ ଉଦ୍ଭିଦ ପରସ୍ପର କେଉଁ କାର୍ଯ୍ୟରେ ସହାୟକ ଅଟନ୍ତି ?

(କ) ବଂଶବୃଦ୍ଧି ☐ (ଖ) ଶ୍ୱାସକ୍ରିୟା ☐

(ଗ) ଉଦ୍ଧାପନା ☐ (ଘ) ଖାଦ୍ୟ ପ୍ରସ୍ତୁତି ☐

୪୭ ଫସଲ ଚାଷ କାହା ଉପରେ ନିର୍ଭର କରେ ?

(କ) ପାଗ ☐ (ଖ) ରତୁ ☐

(ଗ) ମୃତ୍ତିକା ☐ (ଘ) କ, ଖ, ଗ ସବୁ ☐

୪୮ କୋଇଲାରୁ ନାନା ପ୍ରକାରର ଆବଶ୍ୟକୀୟ ପଦାର୍ଥ ତିଆରି ହୁଏ । ଏହା ମଧ୍ୟରୁ କେଉଁଟି କୋଇଲାରୁ ମିଳେ ନାହିଁ ?

(କ) ଗନ୍ଧକପୂର ☐ (ଖ) ସାକାରିନ୍ ☐

(ଗ) ପିଚୁ ୬ ☐ (ଘ) ସୁନା ☐

୪୯. ନିମ୍ନରେ ଦିଆ ଯାଇଥିବା ଉକ୍ତିରୁ କେଉଁଟି ଠିକ୍ ନୁହେ ?

(କ) ବାୟୁରେ ଯବକ୍ଷାରଜାନର ପରିମାଣ ସବୁଠାରୁ ଅଧିକ ☐ (ଖ) ପେଟ୍ରୋଲିୟମ ଏକ ପ୍ରକାରର ଖଣିଜ ତୈଳ ☐

(ଗ) ସମାନ ଓଜନର ଲୁହା ଓ କାଠ ନେଲେ, କାଠର ଆୟତନ ଅଧିକ ☐ (ଘ) ଚନ୍ଦ୍ର ଗୋଟିଏ ଗ୍ରହ ☐

୫୦ ଫସଲ ପର୍ଯ୍ୟାୟ କହିଲେ ନିମ୍ନଲିଖିତ ଉକ୍ତିରୁ କେଉଁଟିକୁ ବୁଝାଯାଏ ?

(କ) ଜମିରେ ଗୋଟିଏ ପ୍ରକାରର ଫସଲ କରିବା ☐ (ଖ) ଜମିରେ ରବି ରତୁରେ ଫସଲ କରିବା ☐

(ଗ) ଜମିରେ ବିଭିନ୍ନ ପ୍ରକାରର ଧାନ କରିବା ☐ (ଘ) ଗୋଟିଏ ଫସଲପରେ ଅନ୍ୟ ପ୍ରକାରର ଫସଲ କରିବା ☐